



April 20, 2015

Mr. Jeff Cain  
SolarBlue LLC  
Chief Operating Officer  
6996 Piazza Granda Ave. Suite 309  
Orlando, FL 32835

**Re: Environmental Consulting Services  
SolarBlue Construction Project  
ADESA Boston  
63 Western Avenue  
Framingham, Massachusetts**

Dear Mr. Cain:

The purpose of this letter is to summarize the soil testing results that were collected during the advancement of eight (8) soil borings in the Southeast Lot of the ADESA Boston facility located in Framingham, Massachusetts (the Site). Tetra Tech was engaged by SolarBlue, LLC to characterize soil that will be disposed of off-Site as part of proposed improvements in the Southeast Lot. Improvements include the construction of a carport which will encompass the entire Southeast Lot of the ADESA Boston facility. It is Tetra Tech's understanding that approximately 200 concrete spread footings measuring 8.5 feet by 8.5 feet and 16 inches deep will be installed during construction of the carport. Assuming the installation of each spread footing will displace 5 cubic yards of soil, Tetra Tech has estimated approximately 1,000 cubic yards (1,600 tons) of soil needed to be characterized for disposal.

### **Soil Borings**

Tetra Tech engaged Drilex Environmental of West Boylston, Massachusetts to advance eight (8) soil borings at the Site on January 5, 2015 under the supervision of Tetra Tech personnel.

The borings were advanced using a truck-mounted CME 55 drill rig using hollow-stem auger drilling equipment. Soil samples were collected continuously using a 24-inch long stainless steel split spoon to a depth of 12 feet below ground surface (bgs), with the exception of boring TT-3 which was advanced to a depth of 13 feet bgs. No odors or staining were noted during the advancement of the eight (8) soil borings. The samples were screened in the field for the presence of headspace volatile VOCs using a photoionization detector (PID) equipped with a 10.6-eV lamp. PID responses are noted in the boring logs included in Appendix A. PID responses ranged from "non-detect" to 2.0 parts per million by volume (ppmv) at boring TT-7.

Based on field observations made during the advancement of the soil borings, soils generally consisted of light brown/tan, fine to medium silty sand with gravel. Dense weathered siltstone

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was encountered in boring TT-2 at a depth of 6 to 8 feet bgs, boring TT-4 at a depth of 10 to 12 feet bgs, and boring TT-8 at a depth of 9 to 12 feet bgs.

Boring logs are included as Attachment 2.

### **Subsurface Soil Collection**

Soil samples collected during the advancement of the soil borings were logged in the field and screened with the PID. PID responses ranged from “non-detect” to 2.0 ppmv from TT-7 at a depth of 2 to 4 feet bgs. Based on field observation and highest PID response, one soil sample from each of the borings was collected. Soil samples collected from TT-1 and TT-2 were combined to make composite sample CS-1-SS. Soil samples collected from TT-3 and TT-4 were combined to make composite sample CS-2-SS. Soil samples collected from TT-5 and TT-6 were combined to make composite sample CS-3-SS. Soil samples collected from TT-7 and TT-8 were combined to make composite sample CS-4-SS. The four composite samples were submitted to Alpha Analytical Laboratory (Alpha) in Westborough, Massachusetts, a state-certified laboratory. The composite samples were analyzed for typical in-state landfill parameters including: Total Petroleum Hydrocarbons (TPH) by EPA Method 8100 Modified, Polychlorinated Biphenyls (PCBs) by EPA Method 8082, Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270, volatile organic compounds (VOCs) by EPA Method 8260, Resource Conservation and Recovery Act (RCRA) 5 Metals, specific conductance, corrosivity (pH), ignitability, and reactivity. Positive analytical results are shown on Table 1 and Laboratory Certificates of Analysis for Alpha are included as Attachment 3.

### **Grain Size Analysis**

Tetra Tech geotechnical testing lab, GeoTesting Express, Inc., provided a technician to collect soil samples for grain size analysis. One sample was collected from each boring for grain size analysis. Samples were collected from the following depth intervals: boring TT-1 from a depth of 8 to 10 feet bgs, boring TT-2 from a depth of 6 to 8 feet bgs; boring TT-3 from a depth of 6 to 8 feet bgs; boring TT-4 from a depth of 6 to 8 feet bgs; boring TT-5 from a depth of 6 to 8 feet bgs; boring TT-6 from a depth of 8 to 10 feet bgs; boring TT-7 from a depth of 4 to 6 feet bgs; and boring TT-8 from a depth of 8 to 10 feet bgs. Soil samples were generally classified as “Silty Soils” except at location TT-4, where the sample was classified as “Silty Gravel and Sand.” The results of the grain size analysis are included as Attachment 4.

### **Results and Conclusions**

Soil analytical results are presented on Table 1. Laboratory certificates of analysis are attached in Appendix B. The results were below Massachusetts Contingency Plan (MCP) RCS-1 reportable concentrations and meet the acceptance limits for Massachusetts unlined landfills, as presented in DEP Policy Comm-97-001. Testing results did not indicate the presence of a listed hazardous waste nor did the soil exhibit a characteristic of hazardous waste. None of the



parameters sampled exceeded the threshold for Toxicity Characteristic Leaching Procedure (TCLP) testing.

Total metals, SVOCs and TPH were below their respective RCS-1 standards. No VOCs or PCBs were identified above laboratory detection limits. TPH was detected in sample CS-1-SS at a concentration of 89.0 mg/kg, which is below RCS-1 reportable concentrations and acceptable landfill reuse limits.

Handling the soil characterized as described in this letter does not require notification to the Massachusetts Department of Protection (DEP). This soil could be reused at a Massachusetts landfill, or reused elsewhere in accordance with DEP's Similar Soils Provision Guidance WSC#-13-500. The Similar Soils Provision generally requires some knowledge of the receiving facility so an assessment can be made whether the concentration of contaminants at the receiving facility are "not significantly lower" than the concentrations in the soil being moved. The Similar Soils Provision Guidance is included as Attachment 5.

Please let us know if you need any additional information.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Kaitlyne Cullinane'.

Kaitlyne Cullinane  
Environmental Engineer 2

A handwritten signature in black ink, appearing to read 'Matthew T. Madden'.

Matthew T. Madden, P.E., L.S.P.  
Senior Project Manager

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Attachment 5   MassDEP Similar Soils Provision Guidance WSC#-13-500

**Table 1**      **Soil Analytical Data (mg/kg)- 63 Western Avenue, Framingham, MA**      **Soil Analytical Data Summary Statistics (mg/kg)**

Location:		Framingham, MA	Framingham, MA	Framingham, MA	Framingham, MA										
Sample Name:		CS-1-SS	CS-2-SS	CS-3-SS	CS-4-SS										
Laboratory:		Alpha	Alpha	Alpha	Alpha										
Laboratory I.D.:		L1500186-01	L1500186-02	L1500186-03	L1500186-04										
Sample Date:		5-Jan-15	5-Jan-15	5-Jan-15	5-Jan-15										
Consultant:	Units	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Number of Times Detected	Number of Times Sought	Minimum Concentration Detected	Maximum Concentration Detected	Average Concentration Detected	MCP RCS-1 mg/kg <sup>(1)</sup>	MCP RCS-2 mg/kg <sup>(1)</sup>	MCP UCL mg/kg <sup>(1)</sup>	Reuse Levels Unlined Landfill mg/kg	Reuse Levels Lined Landfill mg/kg
Total VOCs	mg/kg	ND	ND	ND	ND	ND	4	ND	ND	ND	NA	NA	NA	4	10
Fluoranthene	mg/kg	0.19	<0.12	<0.11	<0.11	1	4	0.19	0.19	0.09	1,000	3,000	10,000	NA	NA
Phenanthrene	mg/kg	0.12	<0.12	<0.11	<0.11	1	4	0.12	0.12	0.07	10	1,000	10,000	NA	NA
Pyrene	mg/kg	0.14	<0.12	<0.11	<0.11	1	4	0.14	0.14	0.08	1,000	3,000	10,000	NA	NA
Total PAHs	mg/kg	0.45	ND	ND	ND	1	4	0.45	0.45	NA	NA	NA	NA	NA	NA
Total SVOCs (including PAHs)	mg/kg	0.45	ND	ND	ND	1	4	0.45	0.45	NA	NA	NA	NA	100	100
Total PCBs <sup>(7)</sup>	mg/kg	ND	ND	ND	ND	ND	4	ND	ND	ND	1	4	100	2	2
Arsenic, Total	mg/kg	5.5	4.8	5.3	7.0	4	4	4.8	7.0	5.7	20	20	500	40	40
Cadmium, Total	mg/kg	<0.42	<0.45	<0.44	<0.44	ND	4	ND	ND	ND	70	100	1,000	30	80
Chromium, Total	mg/kg	57.0	20.0	31.0	38.0	4	4	20.0	57.0	36.5	100	200	2,000	1,000	1,000
Lead, Total	mg/kg	2.5	3.0	<2.2	<2.2	2	4	2.5	3.0	1.9	200	600	6,000	1,000	2,000
Mercury, Total <sup>(8)</sup>	mg/kg	<0.0725	<0.0759	<0.0769	<0.0782	ND	4	ND	ND	ND	20	30	300	10	10
TPH (Total Petroleum Hydrocarbons)	mg/kg	89.0	<38.2	<35.8	<36.6	1	4	89.0	89.0	36.1	1,000	3,000	10,000	2,500	5,000
Cyanide, Reactive	mg/kg	<10	<10	<10	<10	ND	4	ND	ND	ND	NA	NA	NA	<sup>(4)</sup>	<sup>(4)</sup>
Ignitability	Negative/Positive	NI	NI	NI	NI	ND	4	ND	ND	ND	NA	NA	NA	Not Ignitable <sup>(5)</sup>	Not Ignitable <sup>(5)</sup>
pH	SU	7.5	6.4	6.9	7.6	4	4	6.4	7.6	7.1	NA	NA	NA	≤2 or ≥12.5 <sup>(5)</sup>	≤2 or ≥12.5 <sup>(5)</sup>
Solids, Total	%	89.8	85.1	89.8	88.6	4	4	85.1	89.8	88.3	NA	NA	NA	NA	NA
Specific Conductance	uS/cm	<10	12.0	16.0	14.0	3	4	12.0	16.0	11.8	NA	NA	NA	4,000	8,000
Sulfide, Reactive	mg/kg	<10	<10	<10	<10	ND	4	ND	ND	ND	NA	NA	NA	<sup>(4)</sup>	<sup>(4)</sup>

**Notes:**

ND = Not Detected

NA = Not Applicable

NI= Not Ignitable

Concentrations entered as &lt; indicate that they were below the detection limit.

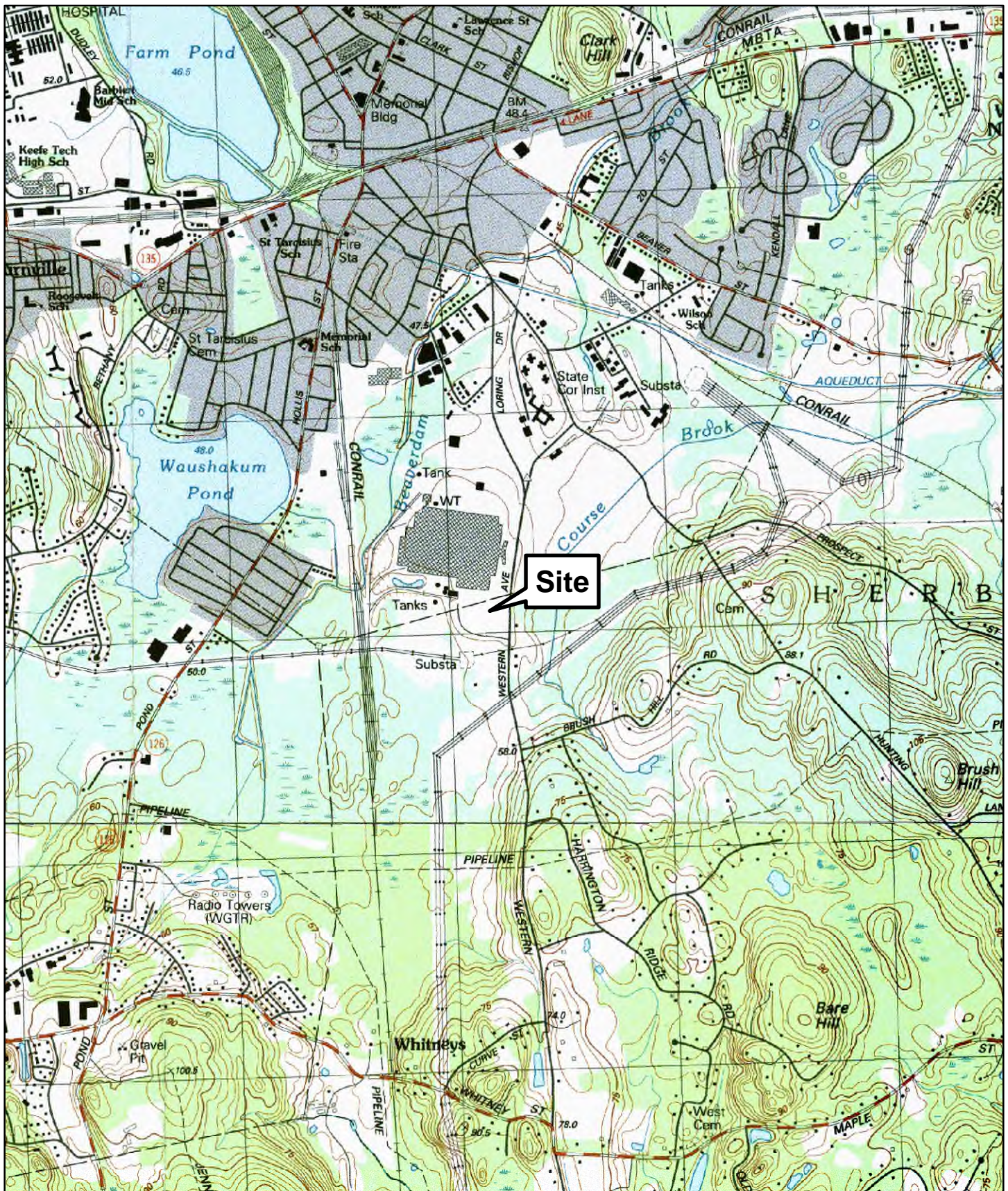
For compounds detected at least once above the detection limit, samples reported as not detected (ND) by the laboratory are assumed to have a concentration of one-half of the method detection limit for that sample in the average calculation.

<sup>(1)</sup> Source: Massachusetts Department of Environmental Protection (DEP) 310 CMR 40.0000 The Massachusetts Contingency Plan, 4/25/2014<sup>(2)</sup> Source: Massachusetts DEP Policy COMM-97-001 "Reuse of Contaminated Soil at Massachusetts Landfills", August 1997<sup>(3)</sup> Cyanide or sulfide bearing waste does not generate toxic gases, vapors or fumes in a quantity sufficient to present a danger

to human health or the environment at pH conditions between 2 and 12.5 [40 CFR Ch.1 §261.23]

<sup>(4)</sup> Source 40 CFR Ch.1 §261.21 to §261.24<sup>(5)</sup> Standards apply to the sum of all PCBs.





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1 inch = 2,000 feet  
 0 1,000 2,000  
 Feet





Southeast Lot

ADESA Boston  
 63 Western Avenue  
 Framingham, Massachusetts

Site Locus Map

Figure 1



-  Project Boundary
-  Approximate Soil Boring Locations *Approximate Soil Boring Location*





**Attachment 1**  
**Limitations**

## Limitations

1. The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the CLIENT. The work described in this report was carried out in accordance with the Terms and Conditions in our contract.
2. In preparing this report, ENGINEER has relied on certain information provided by state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to ENGINEER at the time of the site assessment. Although there may have been some degree of overlap in the information provided by these various sources, ENGINEER did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this site assessment.
3. Observations were made of the Site and of structures on the Site as indicated within the report. Where access to portions of the Site or to structures on the Site was unavailable or limited, ENGINEER renders no opinion as to the presence of hazardous materials or oil, or to the presence of indirect evidence relating to hazardous material or oil, in that portion of the Site or structure. In addition, ENGINEER renders no opinion as to the presence of hazardous material or oil, or the presence of indirect evidence relating to hazardous material or oil, where direct observation of the interior walls, floor, or ceiling of a structure on a Site was obstructed by objects or coverings on or over these surfaces.
4. ENGINEER did not perform testing or analyses to determine the presence or concentration of asbestos at the Site or in the environment at the Site.
5. It is ENGINEER's understanding that the purpose of this report is to assess the physical characteristics of the subject Site with respect to the presence on the Site of hazardous material or oil. This stated purpose has been a significant factor in determining the scope and level of services provided for in the Agreement. Should the purpose for which the Report is to be used or the proposed use of the site(s) change, this Report is no longer valid and use of this Report by CLIENT or others without ENGINEER's review and written authorization shall be at the user's sole risk. Should ENGINEER be required to review the Report after its date of submission, ENGINEER shall be entitled to additional compensation at then existing rates or such other terms as agreed between ENGINEER and the CLIENT.
6. The conclusions and recommendations contained in this report are based in part, where noted, upon the data obtained from a limited number of soil samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.
7. Any water level readings made in test pits, borings, and/or observation wells were made at the times and under the conditions stated on the report. However, it must be noted that fluctuations in the level of groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.



8. Except as noted within the text of the report, no quantitative laboratory testing was performed as part of the site assessment. Where such analyses have been conducted by an outside laboratory, ENGINEER has relied upon the data provided and has not conducted an independent evaluation of the reliability of these data.
9. The conclusions and recommendations contained in this report are based in part, where noted, upon various types of chemical data and are contingent upon their validity. These data have been reviewed and interpretations made in the report. As indicated within the report, some of these data may be preliminary screening level data and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data should be reviewed, and the conclusions and recommendations presented herein modified accordingly.
10. Chemical analyses have been performed for specific constituents during the course of this site assessment, as described in the text. However, it should be noted that additional chemical constituents not searched for during the current study may be present in soil and/or groundwater at the Site.
11. This Report was prepared for the exclusive use of the CLIENT. No other party is entitled to rely on the conclusions, observations, specifications, or data contained therein without the express written consent of ENGINEER.
12. The observations and conclusions described in this Report are based solely on the Scope of Services provided pursuant to the Agreement. ENGINEER has not performed any additional observations, investigations, studies, or testing not specifically stated therein. ENGINEER shall not be liable for the existence of any condition, the discovery of which required the performance of services not authorized under the Agreement.
13. The passage of time may result in significant changes in technology, economic conditions, or site variations that would render the Report inaccurate. Accordingly, neither the CLIENT, nor any other party, shall rely on the information or conclusions contained in this Report after six months from its date of submission without the express written consent of ENGINEER. Reliance on the Report after such period of time shall be at the user's sole risk. Should ENGINEER be required to review the Report after six months from its date of submission, ENGINEER shall be entitled to additional compensation at then existing rates or such other terms as may be agreed upon between ENGINEER and the CLIENT.
14. ENGINEER has endeavored to perform its services based upon engineering practices accepted at the time they were performed. ENGINEER makes no other representations, express or implied, regarding the information, data, analysis, calculations, and conclusions contained herein.
15. The services provided by ENGINEER do not include legal advice. Legal counsel should be consulted regarding interpretation of applicable and relevant federal, state, and local statutes and regulations and other legal matters.

**Attachment 2**

**Boring Logs**



**BORING NUMBER TT-1**

PAGE 1 OF 1

CLIENT SolarBluePROJECT NAME ADESA Boston-Solar Panel Construction ProjectPROJECT NUMBER 143-1298-13008PROJECT LOCATION 63 Western Ave, Framingham, MADATE STARTED 1/5/15COMPLETED 1/5/15

GROUND ELEVATION \_\_\_\_\_

HOLE SIZE 4"DRILLING CONTRACTOR DrillEx Environmental

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger, Truck-mounted, CME 55AT TIME OF DRILLING ---LOGGED BY K. CullinaneCHECKED BY M. MaddenAT END OF DRILLING ---

NOTES \_\_\_\_\_

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0							
						0.3 ASPHALT	
	SS SS-1	35	5-6-9-11 (15)			Tan fine-to-medium silty SAND with trace gravel, dense, moist, no odor.	1.5
2.5						Tan fine-to-medium silty SAND with trace small pieces of gravel, dense, moist, no odor.	
	SS SS-2	79	12-10-7-7 (17)			3.0 Tan fine-to-medium sandy CLAY with trace gravel and silt, loose, moist to wet, no odor.	1.5
						4.0 NO RECOVERY	
5.0	SS SS-3	0	7-6-6-7 (12)			6.0 Tan/light brown fine-to-coarse silty SAND with some large pieces of gravel, dense, moist, no odor.	
	SS SS-4	63	10-19-27- 28 (46)	Soil sample collected from depth interval 6-8' as part of composite sample CS-1-SS.			1.5
7.5						Tan/light brown fine-to-coarse silty SAND with some large pieces of gravel, dense, moist, no odor.	
	SS SS-5	50	13-24-18- 25 (42)				1.5
10.0						Tan/light brown fine-to-coarse silty SAND with some large pieces of gravel, dense, moist, no odor.	
	SS SS-6	118	29-45- 60/5"				1.6
						12.0 Bottom of hole at 12.0 feet.	

GENERAL BH / TP / WELL 2015-01-05-SOLARBLUE CONSTRUCTION PROJECT BORING LOGS.GPJ GINT STD US LAB.GDT 1/9/15



CLIENT SolarBlue

PROJECT NAME ADESA Boston-Solar Panel Construction Project

PROJECT NUMBER 143-1298-13008

PROJECT LOCATION 63 Western Ave, Framingham, MA

DATE STARTED 1/5/15

COMPLETED 1/5/15

GROUND ELEVATION

HOLE SIZE 4"

DRILLING CONTRACTOR DrillEx Environmental

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger, Truck-mounted, CME 55

AT TIME OF DRILLING ---

LOGGED BY K. Cullinane

CHECKED BY M. Madden

AT END OF DRILLING ---

NOTES

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0							
						0.3 ASPHALT	
						0.5 Black coarse GRAVEL, wet, no odor.	
	SS SS-1	46	5-4-5-10 (9)			Light brown fine silty SAND with trace gravel, moist, no odor.	0.8
2.5						Light brown fine silty SAND with trace gravel, moist, no odor.	
	SS SS-2	54	29-34-33- 48 (67)			3.0	
						3.3 Light gray layered ROCK, dry, no odor.	0.6
						Light brown fine-to-medium silty SAND with some large pieces of gravel, moist, no odor.	
	SS SS-3	73	26-55/2"			4.0	
				Soil sample collected from depth interval 4-6' as part of composite sample CS-1-SS.		Light gray gravelly SAND with some large pieces of gravel, dense, moist to wet, no odor.	1.2
5.0						6.0	
	SS SS-4	30	29-60/4"			Light brown weathered SILTSTONE, moist, no odor.	1.0
7.5						8.0	
	SS SS-5	0				NO RECOVERY	
10.0						10.0	
	SS SS-6	71	56-65- 65/2"			Brown SAND with some weathered silt, dense, moist to wet, no odor.	0.6
						12.0	
						Bottom of hole at 12.0 feet.	





GENERAL BH / TP / WELL 2015-01-05 SOLARBLUE CONSTRUCTION PROJECT BORING LOGS.GPJ GINT STD US LAB.GDT 1/9/15

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0							
						0.3 ASPHALT	
						Tan silty SAND with gravel, dense, moist, no odor.	
	SS SS-1	67	2-3-6-8 (9)				0.0
						Tan silty SAND with gravel, dense, moist, no odor.	
2.5						2.5 Tan/brown sandy CLAY with gravel, moist, no odor.	
	SS SS-2	75	6-6-9-14 (15)				0.0
						4.0 Black wealthered ROCK.	
						4.3 Tan silty SAND with gravel, moist, no odor.	
5.0	SS SS-3	77	7-8-13-20 (21)	Soil sample collected from depth interval 4-6' as part of composite sample CS-2-SS.			0.0
						Tan silty SAND with gravel, moist, no odor.	
	SS SS-4	79	18-14-14- 16 (28)			7.0	
7.5						7.3 Black coarse gravelly SAND, moist, no odor.	
						Tan fine silty SAND with gravel, dense, moist, no odor.	
						Tan fine-to-medium silty SAND, dense, moist, no odor.	
	SS SS-5	63	5-11-15-24 (26)				0.0
10.0						10.0	
	SS SS-6	0	60/5"			White Rock, dense.	
						White ROCK, dense.	
12.5	SS SS-7	58	39-42			13.0	0.0
						Bottom of hole at 13.0 feet.	



GENERAL BH / TP / WELL 2015-01-05 SOLARBLUE CONSTRUCTION PROJECT BORING LOGS.GPJ GINT STD US LAB.GDT 1/9/15

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0							
	SS SS-1	83	2-3-5-6 (8)	Soil sample collected from depth interval 1-2' as part of composite sample CS-2-SS.		0.3 ASPHALT	0.7
						Dark brown medium-to-coarse silty SAND, dense, moist, no odor.	
						Brown fine-to-medium silty SAND, loose, moist, no odor.	
2.5						Light brown silty SAND with some gravel, dense, moist, no odor.	
	SS SS-2	92	9-18-16-17 (34)				0.3
						Brown fine-to-medium silty SAND, moist, no odor.	
5.0	SS SS-3	17	15-23-26-29 (49)			0.4	
	SS SS-4	25	22-14-14-11 (28)			0.3	
7.5							
	SS SS-5	67	5-7-9-10 (16)			0.3	
10.0							
	SS SS-6	42	11-13-14-19 (27)		<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div><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<b>CLIENT</b> <u>SolarBlue</u>		<b>PROJECT NAME</b> <u>ADESA Boston-Solar Panel Construction Project</u>	
<b>PROJECT NUMBER</b> <u>143-1298-13008</u>		<b>PROJECT LOCATION</b> <u>63 Western Ave, Framingham, MA</u>	
<b>DATE STARTED</b> <u>1/5/15</u>	<b>COMPLETED</b> <u>1/5/15</u>	<b>GROUND ELEVATION</b> _____	<b>HOLE SIZE</b> <u>4"</u>
<b>DRILLING CONTRACTOR</b> <u>DrillEx Environmental</u>		<b>GROUND WATER LEVELS:</b>	
<b>DRILLING METHOD</b> <u>Hollow Stem Auger, Truck-mounted, CME 55</u>		<b>AT TIME OF DRILLING</b> <u>---</u>	
<b>LOGGED BY</b> <u>K. Cullinane</u>		<b>AT END OF DRILLING</b> <u>---</u>	
<b>CHECKED BY</b> <u>M. Madden</u>		<b>AFTER DRILLING</b> <u>---</u>	
<b>NOTES</b> _____			

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0							
						0.3 ASPHALT	
	SS SS-1	46	3-4-6-7 (10)			Light brown fine-to-medium silty SAND with trace gravel, loose, moist to wet, no odor.	1.0
2.5							
	SS SS-2	50	8-9-16-14 (25)			Light brown fine-to-medium silty SAND with trace gravel, loose, moist to wet, no odor.	1.1
5.0							
	SS SS-3	75	17-35-37-38 (72)	Soil sample collected from depth interval 4-6' as part of composite sample CS-3-SS.		Light brown fine-to-medium silty SAND with trace gravel, loose, moist to wet, no odor.	1.2
						5.3	
						5.5 White ROCK, dense.	
						5.8 Light brown fine-to-medium silty SAND with trace gravel, loose, moist to wet, no odor.	
						6.0 White ROCK, dense.	
7.5							
	SS SS-4	54	40-55-53-47 (108)			Light brown fine-to-medium silty SAND with trace gravel, loose, moist to wet, no odor.	1.1
	SS SS-5	83	8-33-26-18 (59)			Light brown fine-to-medium silty SAND with trace gravel, loose, moist to wet, no odor.	1.2
10.0							
	SS SS-6	88	24-52-58-62/0"			Orange medium-to-coarse silty SAND with gravel, dense, moist, no odor.	0.7
						12.0	
						Bottom of hole at 12.0 feet.	

GENERAL BH / TP / WELL 2015-01-05-SOLARBLUE CONSTRUCTION PROJECT BORING LOGS.GPJ GINT STD US LAB.GDT 1/9/15



GENERAL BH / TP / WELL 2015-01-05 SOLARBLUE CONSTRUCTION PROJECT BORING LOGS.GPJ GINT STD US LAB.GDT 1/9/15

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0							
						0.3 ASPHALT	
						Light brown fine-to-medium SAND, moist, no odor.	0.6
2.5							
	SS SS-1	50	7-7-6-18 (13)			Light brown fine-to-medium silty SAND with some gravel, dense, moist, no odor.	0.6
	SS SS-2	63	22-12-12- 12 (24)				
5.0						4.0 NO RECOVERY	
	SS SS-3	0	6-13-13-9 (26)				
	SS SS-4	17	11-18-14- 15 (32)	Soil sample collected from depth interval 6-8' as part of composite sample CS-3-SS.		6.0 Light brown fine-to-medium silty SAND with some gravel, dense, moist, no odor.	0.8
7.5							
	SS SS-5	58	7-11-33-11 (44)			Light brown fine-to-medium silty SAND with some gravel, dense, moist, no odor.	0.4
10.0						Light brown fine-to-medium silty SAND with some gravel, dense, moist, no odor.	
	SS SS-6	29	15-8-9-9 (17)				0.6
						12.0 Bottom of hole at 12.0 feet.	



CLIENT SolarBlue

PROJECT NAME ADESA Boston-Solar Panel Construction Project

PROJECT NUMBER 143-1298-13008

PROJECT LOCATION 63 Western Ave, Framingham, MA

DATE STARTED 1/5/15

COMPLETED 1/5/15

GROUND ELEVATION

HOLE SIZE 4"

DRILLING CONTRACTOR DrillEx Environmental

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger, Truck-mounted, CME 55

AT TIME OF DRILLING ---

LOGGED BY K. Cullinane

CHECKED BY M. Madden

AT END OF DRILLING ---

NOTES

AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0							
						0.3 ASPHALT	
	SS SS-1	46	11-8-9-13 (17)	Soil sample collected from depth interval 2-4' as part of composite sample CS-4-SS.		Light brown fine-to-medium silty SAND with trace gravel, moist, no odor.	1.4
2.5	SS SS-2	46	22-28-14- 16 (42)			Light brown fine-to-medium silty SAND with trace gravel, white rock from 2.5-3', moist, no odor.	2.0
5.0	SS SS-3	54	10-12-16- 20 (28)			Light brown fine-to-medium silty SAND with some gravel, moist, no odor.	1.4
	SS SS-4	60	36-60/4"			Light brown fine-to-medium silty SAND with some gravel, moist, no odor.	1.1
7.5							
	SS SS-5	0	18-55/1"			8.0 NO RECOVERY	
10.0							
	SS SS-6	86	18-55/1"			10.0 Light gray medium-to-coarse SAND with some silt and gravel, wet, no odor.	1.2
						12.0 Bottom of hole at 12.0 feet.	

GENERAL BH / TP / WELL 2015-01-05-SOLARBLUE CONSTRUCTION PROJECT BORING LOGS.GPJ GINT STD US LAB.GDT 1/9/15





<b>CLIENT</b> <u>SolarBlue</u>		<b>PROJECT NAME</b> <u>ADESA Boston-Solar Panel Construction Project</u>	
<b>PROJECT NUMBER</b> <u>143-1298-13008</u>		<b>PROJECT LOCATION</b> <u>63 Western Ave, Framingham, MA</u>	
<b>DATE STARTED</b> <u>1/5/15</u>	<b>COMPLETED</b> <u>1/5/15</u>	<b>GROUND ELEVATION</b> _____	<b>HOLE SIZE</b> <u>4"</u>
<b>DRILLING CONTRACTOR</b> <u>DrillEx Environmental</u>		<b>GROUND WATER LEVELS:</b>	
<b>DRILLING METHOD</b> <u>Hollow Stem Auger, Truck-mounted, CME 55</u>		<b>AT TIME OF DRILLING</b> <u>---</u>	
<b>LOGGED BY</b> <u>K. Cullinane</u>		<b>AT END OF DRILLING</b> <u>---</u>	
<b>CHECKED BY</b> <u>M. Madden</u>		<b>AFTER DRILLING</b> <u>---</u>	
<b>NOTES</b> _____			

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0							
						0.3 ASPHALT	
	SS SS-1	21	7-7-6-5 (13)			Light brown gravelly SAND with some silt, moist, no odor.	1.3
						2.0	
2.5	SS SS-2	83	6-6-12-18 (18)			Dark brown silty SAND with some gravel, moist, no odor.	1.0
5.0	SS SS-3	67	14-19-15-12 (34)			Light brown fine-to-medium silty SAND with trace gravel, dense, moist, no odor.	1.1
7.5	SS SS-4	50	13-11-10-15 (21)	Soil sample collected from depth interval 6-8' as part of composite sample CS-4-SS.		Light brown fine-to-medium silty SAND with trace gravel, dense, moist, no odor.	1.4
	SS SS-5	67	16-25-21-17 (46)			Light brown fine-to-medium silty SAND with trace gravel, dense, moist, no odor.	
						9.0	
						Gray SILTSTONE, dense, dry, no odor.	1.1
10.0							
	SS SS-6	29	21-16-21-19 (37)			Gray SILTSTONE, dense, dry, no odor.	0.8
						12.0	
						Bottom of hole at 12.0 feet.	

GENERAL BH / TP / WELL 2015-01-05 SOLARBLUE CONSTRUCTION PROJECT BORING LOGS.GPJ GINT STD US LAB.GDT 1/9/15

**Attachment 3**

**Laboratory Certificates of Analysis – Alpha Analytical**



## ANALYTICAL REPORT

Lab Number:	L1500186
Client:	Tetra Tech Rizzo 1 Grant Street Framingham, MA 01702
ATTN:	Matt Madden
Phone:	(508) 903-2000
Project Name:	ADESA BOSTON
Project Number:	143-1298-13008
Report Date:	01/13/15

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)





**Project Name:** ADESA BOSTON  
**Project Number:** 143-1298-13008

**Lab Number:** L1500186  
**Report Date:** 01/13/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1500186-01	CS-1-SS	SOIL	FRAMINGHAM, MA	01/05/15 12:15	01/06/15
L1500186-02	CS-2-SS	SOIL	FRAMINGHAM, MA	01/05/15 09:45	01/06/15
L1500186-03	CS-3-SS	SOIL	FRAMINGHAM, MA	01/05/15 15:15	01/06/15
L1500186-04	CS-4-SS	SOIL	FRAMINGHAM, MA	01/05/15 16:05	01/06/15

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

**MADEP MCP Response Action Analytical Report Certification**

**This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.**

<b>An affirmative response to questions A through F is required for "Presumptive Certainty" status</b>		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
<b>A response to questions G, H and I is required for "Presumptive Certainty" status</b>		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO
<b>For any questions answered "No", please refer to the case narrative section on the following page(s).</b>		

**Please note that sample matrix information is located in the Sample Results section of this report.**



**Project Name:** ADESA BOSTON  
**Project Number:** 143-1298-13008

**Lab Number:** L1500186  
**Report Date:** 01/13/15

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

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**Project Name:** ADESA BOSTON  
**Project Number:** 143-1298-13008

**Lab Number:** L1500186  
**Report Date:** 01/13/15

### Case Narrative (continued)

#### MCP Related Narratives

##### Sample Receipt

In reference to question H:

A Matrix Spike was not submitted for the analysis of Metals.

#### Volatile Organics

In reference to question H:

The WG755030-1/-2 LCS/LCSD recoveries, associated with L1500186-01 through -04, are outside the acceptance criteria for individual target compounds, but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially high bias for trichlorofluoromethane (153%/143%), bromomethane (174%/164%), vinyl chloride (LCS 134%), chloroethane (160%/154%), and ethyl ether (140%/139%); and a potentially low bias for 2-hexanone (66%/66%).

The initial calibration, associated with L1500186-01 through -04, met the method criteria except the initial calibration verification is outside acceptance criteria for dichlorodifluoromethane (200%). The compounds were within overall method criteria, with the exception of dichlorodifluoromethane; however, the associated samples were non-detect for this compound.

The continuing calibration standard, associated with L1500186-01 through -04, is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

#### Metals

In reference to question I:

All samples were analyzed for a subset of MCP elements per the Chain of Custody.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Bryan Vangel

Title: Technical Director/Representative

Date: 01/13/15

# ORGANICS

# **VOLATILES**



**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-01  
**Client ID:** CS-1-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 97,8260C  
**Analytical Date:** 01/11/15 18:22  
**Analyst:** BN  
**Percent Solids:** 90%

**Date Collected:** 01/05/15 12:15  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	9.0	--	1
1,1-Dichloroethane	ND		ug/kg	1.3	--	1
Chloroform	ND		ug/kg	1.3	--	1
Carbon tetrachloride	ND		ug/kg	0.90	--	1
1,2-Dichloropropane	ND		ug/kg	3.1	--	1
Dibromochloromethane	ND		ug/kg	0.90	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.3	--	1
Tetrachloroethene	ND		ug/kg	0.90	--	1
Chlorobenzene	ND		ug/kg	0.90	--	1
Trichlorofluoromethane	ND		ug/kg	3.6	--	1
1,2-Dichloroethane	ND		ug/kg	0.90	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.90	--	1
Bromodichloromethane	ND		ug/kg	0.90	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.90	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.90	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.90	--	1
1,1-Dichloropropene	ND		ug/kg	3.6	--	1
Bromoform	ND		ug/kg	3.6	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.90	--	1
Benzene	ND		ug/kg	0.90	--	1
Toluene	ND		ug/kg	1.3	--	1
Ethylbenzene	ND		ug/kg	0.90	--	1
Chloromethane	ND		ug/kg	3.6	--	1
Bromomethane	ND		ug/kg	1.8	--	1
Vinyl chloride	ND		ug/kg	1.8	--	1
Chloroethane	ND		ug/kg	1.8	--	1
1,1-Dichloroethene	ND		ug/kg	0.90	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	--	1
Trichloroethene	ND		ug/kg	0.90	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.6	--	1

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-01

Date Collected: 01/05/15 12:15

Client ID: CS-1-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	3.6	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.6	--	1
Methyl tert butyl ether	ND		ug/kg	1.8	--	1
p/m-Xylene	ND		ug/kg	1.8	--	1
o-Xylene	ND		ug/kg	1.8	--	1
Xylenes, Total	ND		ug/kg	1.8	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.90	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.90	--	1
Dibromomethane	ND		ug/kg	3.6	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.6	--	1
Styrene	ND		ug/kg	1.8	--	1
Dichlorodifluoromethane	ND		ug/kg	9.0	--	1
Acetone	ND		ug/kg	32	--	1
Carbon disulfide	ND		ug/kg	3.6	--	1
Methyl ethyl ketone	ND		ug/kg	9.0	--	1
Methyl isobutyl ketone	ND		ug/kg	9.0	--	1
2-Hexanone	ND		ug/kg	9.0	--	1
Bromochloromethane	ND		ug/kg	3.6	--	1
Tetrahydrofuran	ND		ug/kg	3.6	--	1
2,2-Dichloropropane	ND		ug/kg	4.5	--	1
1,2-Dibromoethane	ND		ug/kg	3.6	--	1
1,3-Dichloropropane	ND		ug/kg	3.6	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.90	--	1
Bromobenzene	ND		ug/kg	4.5	--	1
n-Butylbenzene	ND		ug/kg	0.90	--	1
sec-Butylbenzene	ND		ug/kg	0.90	--	1
tert-Butylbenzene	ND		ug/kg	3.6	--	1
o-Chlorotoluene	ND		ug/kg	3.6	--	1
p-Chlorotoluene	ND		ug/kg	3.6	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.6	--	1
Hexachlorobutadiene	ND		ug/kg	3.6	--	1
Isopropylbenzene	ND		ug/kg	0.90	--	1
p-Isopropyltoluene	ND		ug/kg	0.90	--	1
Naphthalene	ND		ug/kg	3.6	--	1
n-Propylbenzene	ND		ug/kg	0.90	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.6	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.6	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.6	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.6	--	1

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-01

Date Collected: 01/05/15 12:15

Client ID: CS-1-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Diethyl ether	ND		ug/kg	4.5	--	1
Diisopropyl Ether	ND		ug/kg	3.6	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.6	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.6	--	1
1,4-Dioxane	ND		ug/kg	36	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	104		70-130

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-02  
**Client ID:** CS-2-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 97,8260C  
**Analytical Date:** 01/11/15 18:49  
**Analyst:** BN  
**Percent Solids:** 85%

**Date Collected:** 01/05/15 09:45  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	7.7	--	1
1,1-Dichloroethane	ND		ug/kg	1.2	--	1
Chloroform	ND		ug/kg	1.2	--	1
Carbon tetrachloride	ND		ug/kg	0.77	--	1
1,2-Dichloropropane	ND		ug/kg	2.7	--	1
Dibromochloromethane	ND		ug/kg	0.77	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	--	1
Tetrachloroethene	ND		ug/kg	0.77	--	1
Chlorobenzene	ND		ug/kg	0.77	--	1
Trichlorofluoromethane	ND		ug/kg	3.1	--	1
1,2-Dichloroethane	ND		ug/kg	0.77	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.77	--	1
Bromodichloromethane	ND		ug/kg	0.77	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.77	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.77	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.77	--	1
1,1-Dichloropropene	ND		ug/kg	3.1	--	1
Bromoform	ND		ug/kg	3.1	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.77	--	1
Benzene	ND		ug/kg	0.77	--	1
Toluene	ND		ug/kg	1.2	--	1
Ethylbenzene	ND		ug/kg	0.77	--	1
Chloromethane	ND		ug/kg	3.1	--	1
Bromomethane	ND		ug/kg	1.5	--	1
Vinyl chloride	ND		ug/kg	1.5	--	1
Chloroethane	ND		ug/kg	1.5	--	1
1,1-Dichloroethene	ND		ug/kg	0.77	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	--	1
Trichloroethene	ND		ug/kg	0.77	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.1	--	1



Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-02

Date Collected: 01/05/15 09:45

Client ID: CS-2-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	3.1	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.1	--	1
Methyl tert butyl ether	ND		ug/kg	1.5	--	1
p/m-Xylene	ND		ug/kg	1.5	--	1
o-Xylene	ND		ug/kg	1.5	--	1
Xylenes, Total	ND		ug/kg	1.5	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.77	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.77	--	1
Dibromomethane	ND		ug/kg	3.1	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.1	--	1
Styrene	ND		ug/kg	1.5	--	1
Dichlorodifluoromethane	ND		ug/kg	7.7	--	1
Acetone	ND		ug/kg	28	--	1
Carbon disulfide	ND		ug/kg	3.1	--	1
Methyl ethyl ketone	ND		ug/kg	7.7	--	1
Methyl isobutyl ketone	ND		ug/kg	7.7	--	1
2-Hexanone	ND		ug/kg	7.7	--	1
Bromochloromethane	ND		ug/kg	3.1	--	1
Tetrahydrofuran	ND		ug/kg	3.1	--	1
2,2-Dichloropropane	ND		ug/kg	3.9	--	1
1,2-Dibromoethane	ND		ug/kg	3.1	--	1
1,3-Dichloropropane	ND		ug/kg	3.1	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.77	--	1
Bromobenzene	ND		ug/kg	3.9	--	1
n-Butylbenzene	ND		ug/kg	0.77	--	1
sec-Butylbenzene	ND		ug/kg	0.77	--	1
tert-Butylbenzene	ND		ug/kg	3.1	--	1
o-Chlorotoluene	ND		ug/kg	3.1	--	1
p-Chlorotoluene	ND		ug/kg	3.1	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.1	--	1
Hexachlorobutadiene	ND		ug/kg	3.1	--	1
Isopropylbenzene	ND		ug/kg	0.77	--	1
p-Isopropyltoluene	ND		ug/kg	0.77	--	1
Naphthalene	ND		ug/kg	3.1	--	1
n-Propylbenzene	ND		ug/kg	0.77	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.1	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.1	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.1	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.1	--	1

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-02

Date Collected: 01/05/15 09:45

Client ID: CS-2-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Diethyl ether	ND		ug/kg	3.9	--	1
Diisopropyl Ether	ND		ug/kg	3.1	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.1	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.1	--	1
1,4-Dioxane	ND		ug/kg	31	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	106		70-130

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-03  
**Client ID:** CS-3-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 97,8260C  
**Analytical Date:** 01/11/15 19:16  
**Analyst:** BN  
**Percent Solids:** 90%

**Date Collected:** 01/05/15 15:15  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	8.3	--	1
1,1-Dichloroethane	ND		ug/kg	1.2	--	1
Chloroform	ND		ug/kg	1.2	--	1
Carbon tetrachloride	ND		ug/kg	0.83	--	1
1,2-Dichloropropane	ND		ug/kg	2.9	--	1
Dibromochloromethane	ND		ug/kg	0.83	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	--	1
Tetrachloroethene	ND		ug/kg	0.83	--	1
Chlorobenzene	ND		ug/kg	0.83	--	1
Trichlorofluoromethane	ND		ug/kg	3.3	--	1
1,2-Dichloroethane	ND		ug/kg	0.83	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.83	--	1
Bromodichloromethane	ND		ug/kg	0.83	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.83	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.83	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.83	--	1
1,1-Dichloropropene	ND		ug/kg	3.3	--	1
Bromoform	ND		ug/kg	3.3	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.83	--	1
Benzene	ND		ug/kg	0.83	--	1
Toluene	ND		ug/kg	1.2	--	1
Ethylbenzene	ND		ug/kg	0.83	--	1
Chloromethane	ND		ug/kg	3.3	--	1
Bromomethane	ND		ug/kg	1.7	--	1
Vinyl chloride	ND		ug/kg	1.7	--	1
Chloroethane	ND		ug/kg	1.7	--	1
1,1-Dichloroethene	ND		ug/kg	0.83	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	--	1
Trichloroethene	ND		ug/kg	0.83	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.3	--	1

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-03

Date Collected: 01/05/15 15:15

Client ID: CS-3-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	3.3	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.3	--	1
Methyl tert butyl ether	ND		ug/kg	1.7	--	1
p/m-Xylene	ND		ug/kg	1.7	--	1
o-Xylene	ND		ug/kg	1.7	--	1
Xylenes, Total	ND		ug/kg	1.7	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.83	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.83	--	1
Dibromomethane	ND		ug/kg	3.3	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.3	--	1
Styrene	ND		ug/kg	1.7	--	1
Dichlorodifluoromethane	ND		ug/kg	8.3	--	1
Acetone	ND		ug/kg	30	--	1
Carbon disulfide	ND		ug/kg	3.3	--	1
Methyl ethyl ketone	ND		ug/kg	8.3	--	1
Methyl isobutyl ketone	ND		ug/kg	8.3	--	1
2-Hexanone	ND		ug/kg	8.3	--	1
Bromochloromethane	ND		ug/kg	3.3	--	1
Tetrahydrofuran	ND		ug/kg	3.3	--	1
2,2-Dichloropropane	ND		ug/kg	4.2	--	1
1,2-Dibromoethane	ND		ug/kg	3.3	--	1
1,3-Dichloropropane	ND		ug/kg	3.3	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.83	--	1
Bromobenzene	ND		ug/kg	4.2	--	1
n-Butylbenzene	ND		ug/kg	0.83	--	1
sec-Butylbenzene	ND		ug/kg	0.83	--	1
tert-Butylbenzene	ND		ug/kg	3.3	--	1
o-Chlorotoluene	ND		ug/kg	3.3	--	1
p-Chlorotoluene	ND		ug/kg	3.3	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.3	--	1
Hexachlorobutadiene	ND		ug/kg	3.3	--	1
Isopropylbenzene	ND		ug/kg	0.83	--	1
p-Isopropyltoluene	ND		ug/kg	0.83	--	1
Naphthalene	ND		ug/kg	3.3	--	1
n-Propylbenzene	ND		ug/kg	0.83	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.3	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.3	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.3	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.3	--	1



Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-03

Date Collected: 01/05/15 15:15

Client ID: CS-3-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Diethyl ether	ND		ug/kg	4.2	--	1
Diisopropyl Ether	ND		ug/kg	3.3	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.3	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.3	--	1
1,4-Dioxane	ND		ug/kg	33	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	106		70-130

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-04  
 Client ID: CS-4-SS  
 Sample Location: FRAMINGHAM, MA  
 Matrix: Soil  
 Analytical Method: 97,8260C  
 Analytical Date: 01/11/15 19:43  
 Analyst: BN  
 Percent Solids: 89%

Date Collected: 01/05/15 16:05  
 Date Received: 01/06/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	9.1	--	1
1,1-Dichloroethane	ND		ug/kg	1.4	--	1
Chloroform	ND		ug/kg	1.4	--	1
Carbon tetrachloride	ND		ug/kg	0.91	--	1
1,2-Dichloropropane	ND		ug/kg	3.2	--	1
Dibromochloromethane	ND		ug/kg	0.91	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.4	--	1
Tetrachloroethene	ND		ug/kg	0.91	--	1
Chlorobenzene	ND		ug/kg	0.91	--	1
Trichlorofluoromethane	ND		ug/kg	3.6	--	1
1,2-Dichloroethane	ND		ug/kg	0.91	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.91	--	1
Bromodichloromethane	ND		ug/kg	0.91	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.91	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.91	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.91	--	1
1,1-Dichloropropene	ND		ug/kg	3.6	--	1
Bromoform	ND		ug/kg	3.6	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.91	--	1
Benzene	ND		ug/kg	0.91	--	1
Toluene	ND		ug/kg	1.4	--	1
Ethylbenzene	ND		ug/kg	0.91	--	1
Chloromethane	ND		ug/kg	3.6	--	1
Bromomethane	ND		ug/kg	1.8	--	1
Vinyl chloride	ND		ug/kg	1.8	--	1
Chloroethane	ND		ug/kg	1.8	--	1
1,1-Dichloroethene	ND		ug/kg	0.91	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	--	1
Trichloroethene	ND		ug/kg	0.91	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.6	--	1

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-04

Date Collected: 01/05/15 16:05

Client ID: CS-4-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	3.6	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.6	--	1
Methyl tert butyl ether	ND		ug/kg	1.8	--	1
p/m-Xylene	ND		ug/kg	1.8	--	1
o-Xylene	ND		ug/kg	1.8	--	1
Xylenes, Total	ND		ug/kg	1.8	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.91	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.91	--	1
Dibromomethane	ND		ug/kg	3.6	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.6	--	1
Styrene	ND		ug/kg	1.8	--	1
Dichlorodifluoromethane	ND		ug/kg	9.1	--	1
Acetone	ND		ug/kg	33	--	1
Carbon disulfide	ND		ug/kg	3.6	--	1
Methyl ethyl ketone	ND		ug/kg	9.1	--	1
Methyl isobutyl ketone	ND		ug/kg	9.1	--	1
2-Hexanone	ND		ug/kg	9.1	--	1
Bromochloromethane	ND		ug/kg	3.6	--	1
Tetrahydrofuran	ND		ug/kg	3.6	--	1
2,2-Dichloropropane	ND		ug/kg	4.6	--	1
1,2-Dibromoethane	ND		ug/kg	3.6	--	1
1,3-Dichloropropane	ND		ug/kg	3.6	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.91	--	1
Bromobenzene	ND		ug/kg	4.6	--	1
n-Butylbenzene	ND		ug/kg	0.91	--	1
sec-Butylbenzene	ND		ug/kg	0.91	--	1
tert-Butylbenzene	ND		ug/kg	3.6	--	1
o-Chlorotoluene	ND		ug/kg	3.6	--	1
p-Chlorotoluene	ND		ug/kg	3.6	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.6	--	1
Hexachlorobutadiene	ND		ug/kg	3.6	--	1
Isopropylbenzene	ND		ug/kg	0.91	--	1
p-Isopropyltoluene	ND		ug/kg	0.91	--	1
Naphthalene	ND		ug/kg	3.6	--	1
n-Propylbenzene	ND		ug/kg	0.91	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.6	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.6	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.6	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.6	--	1

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-04

Date Collected: 01/05/15 16:05

Client ID: CS-4-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Diethyl ether	ND		ug/kg	4.6	--	1
Diisopropyl Ether	ND		ug/kg	3.6	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.6	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.6	--	1
1,4-Dioxane	ND		ug/kg	36	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	106		70-130



Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C  
 Analytical Date: 01/11/15 12:31  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-04 Batch: WG755030-3					
Methylene chloride	ND		ug/kg	10	--
1,1-Dichloroethane	ND		ug/kg	1.5	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	3.5	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.5	--
Tetrachloroethene	ND		ug/kg	1.0	--
Chlorobenzene	ND		ug/kg	1.0	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	1.0	--
Bromodichloromethane	ND		ug/kg	1.0	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	1.0	--
1,3-Dichloropropene, Total	ND		ug/kg	1.0	--
1,1-Dichloropropene	ND		ug/kg	4.0	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	--
Benzene	ND		ug/kg	1.0	--
Toluene	ND		ug/kg	1.5	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	2.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--
Trichloroethene	ND		ug/kg	1.0	--

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C  
 Analytical Date: 01/11/15 12:31  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-04 Batch: WG755030-3					
1,2-Dichlorobenzene	ND		ug/kg	4.0	--
1,3-Dichlorobenzene	ND		ug/kg	4.0	--
1,4-Dichlorobenzene	ND		ug/kg	4.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	2.0	--
Xylenes, Total	ND		ug/kg	2.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	4.0	--
1,2,3-Trichloropropane	ND		ug/kg	4.0	--
Styrene	ND		ug/kg	2.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	36	--
Carbon disulfide	ND		ug/kg	4.0	--
Methyl ethyl ketone	ND		ug/kg	10	--
Methyl isobutyl ketone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Bromochloromethane	ND		ug/kg	4.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	5.0	--
1,2-Dibromoethane	ND		ug/kg	4.0	--
1,3-Dichloropropane	ND		ug/kg	4.0	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	--
Bromobenzene	ND		ug/kg	5.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	4.0	--
o-Chlorotoluene	ND		ug/kg	4.0	--

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C  
 Analytical Date: 01/11/15 12:31  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-04 Batch: WG755030-3					
p-Chlorotoluene	ND		ug/kg	4.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	4.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	4.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	4.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	4.0	--
Diethyl ether	ND		ug/kg	5.0	--
Diisopropyl Ether	ND		ug/kg	4.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.0	--
1,4-Dioxane	ND		ug/kg	40	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	104		70-130

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-04 Batch: WG755030-1 WG755030-2								
Methylene chloride	106		103		70-130	3		20
1,1-Dichloroethane	98		93		70-130	5		20
Chloroform	103		96		70-130	7		20
Carbon tetrachloride	111		103		70-130	7		20
1,2-Dichloropropane	96		94		70-130	2		20
Dibromochloromethane	98		97		70-130	1		20
1,1,2-Trichloroethane	97		97		70-130	0		20
Tetrachloroethene	103		97		70-130	6		20
Chlorobenzene	102		99		70-130	3		20
Trichlorofluoromethane	153	Q	142	Q	70-130	7		20
1,2-Dichloroethane	96		94		70-130	2		20
1,1,1-Trichloroethane	105		98		70-130	7		20
Bromodichloromethane	98		97		70-130	1		20
trans-1,3-Dichloropropene	93		92		70-130	1		20
cis-1,3-Dichloropropene	95		94		70-130	1		20
1,1-Dichloropropene	103		96		70-130	7		20
Bromoform	93		92		70-130	1		20
1,1,2,2-Tetrachloroethane	91		89		70-130	2		20
Benzene	101		98		70-130	3		20
Toluene	102		97		70-130	5		20
Ethylbenzene	101		96		70-130	5		20



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-04 Batch: WG755030-1 WG755030-2								
Chloromethane	96		89		70-130	8		20
Bromomethane	174	Q	164	Q	70-130	6		20
Vinyl chloride	134	Q	123		70-130	9		20
Chloroethane	160	Q	154	Q	70-130	4		20
1,1-Dichloroethene	107		98		70-130	9		20
trans-1,2-Dichloroethene	101		97		70-130	4		20
Trichloroethene	102		99		70-130	3		20
1,2-Dichlorobenzene	98		96		70-130	2		20
1,3-Dichlorobenzene	102		99		70-130	3		20
1,4-Dichlorobenzene	102		99		70-130	3		20
Methyl tert butyl ether	90		89		70-130	1		20
p/m-Xylene	106		100		70-130	6		20
o-Xylene	103		99		70-130	4		20
cis-1,2-Dichloroethene	102		99		70-130	3		20
Dibromomethane	100		99		70-130	1		20
1,2,3-Trichloropropane	91		86		70-130	6		20
Styrene	104		101		70-130	3		20
Dichlorodifluoromethane	99		92		70-130	7		20
Acetone	99		96		70-130	3		20
Carbon disulfide	102		95		70-130	7		20
Methyl ethyl ketone	92		92		70-130	0		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-04 Batch: WG755030-1 WG755030-2								
Methyl isobutyl ketone	80		80		70-130	0		20
2-Hexanone	66	Q	66	Q	70-130	0		20
Bromochloromethane	106		105		70-130	1		20
Tetrahydrofuran	82		82		70-130	0		20
2,2-Dichloropropane	100		93		70-130	7		20
1,2-Dibromoethane	97		97		70-130	0		20
1,3-Dichloropropane	96		93		70-130	3		20
1,1,1,2-Tetrachloroethane	101		96		70-130	5		20
Bromobenzene	94		90		70-130	4		20
n-Butylbenzene	106		99		70-130	7		20
sec-Butylbenzene	103		97		70-130	6		20
tert-Butylbenzene	99		94		70-130	5		20
o-Chlorotoluene	88		90		70-130	2		20
p-Chlorotoluene	96		92		70-130	4		20
1,2-Dibromo-3-chloropropane	87		87		70-130	0		20
Hexachlorobutadiene	85		80		70-130	6		20
Isopropylbenzene	100		93		70-130	7		20
p-Isopropyltoluene	102		96		70-130	6		20
Naphthalene	86		87		70-130	1		20
n-Propylbenzene	100		95		70-130	5		20
1,2,3-Trichlorobenzene	88		88		70-130	0		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-04 Batch: WG755030-1 WG755030-2								
1,2,4-Trichlorobenzene	91		88		70-130	3		20
1,3,5-Trimethylbenzene	99		94		70-130	5		20
1,2,4-Trimethylbenzene	99		94		70-130	5		20
Diethyl ether	140	Q	139	Q	70-130	1		20
Diisopropyl Ether	88		86		70-130	2		20
Ethyl-Tert-Butyl-Ether	90		89		70-130	1		20
Tertiary-Amyl Methyl Ether	89		89		70-130	0		20
1,4-Dioxane	90		92		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		96		70-130
Toluene-d8	98		99		70-130
4-Bromofluorobenzene	90		91		70-130
Dibromofluoromethane	104		105		70-130

# SEMIVOLATILES

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-01  
**Client ID:** CS-1-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 97,8270D  
**Analytical Date:** 01/09/15 17:51  
**Analyst:** HL  
**Percent Solids:** 90%

**Date Collected:** 01/05/15 12:15  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 01/08/15 16:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	150	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	--	1
Hexachlorobenzene	ND		ug/kg	110	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	180	--	1
1,2-Dichlorobenzene	ND		ug/kg	180	--	1
1,3-Dichlorobenzene	ND		ug/kg	180	--	1
1,4-Dichlorobenzene	ND		ug/kg	180	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	--	1
2,4-Dinitrotoluene	ND		ug/kg	180	--	1
2,6-Dinitrotoluene	ND		ug/kg	180	--	1
Azobenzene	ND		ug/kg	180	--	1
Fluoranthene	190		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	--	1
Hexachlorobutadiene	ND		ug/kg	180	--	1
Hexachloroethane	ND		ug/kg	150	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	ND		ug/kg	180	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	--	1
Butyl benzyl phthalate	ND		ug/kg	180	--	1
Di-n-butylphthalate	ND		ug/kg	180	--	1
Di-n-octylphthalate	ND		ug/kg	180	--	1
Diethyl phthalate	ND		ug/kg	180	--	1
Dimethyl phthalate	ND		ug/kg	180	--	1
Benzo(a)anthracene	ND		ug/kg	110	--	1
Benzo(a)pyrene	ND		ug/kg	150	--	1
Benzo(b)fluoranthene	ND		ug/kg	110	--	1

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-01

Date Collected: 01/05/15 12:15

Client ID: CS-1-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	ND		ug/kg	110	--	1
Chrysene	ND		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	150	--	1
Anthracene	ND		ug/kg	110	--	1
Benzo(ghi)perylene	ND		ug/kg	150	--	1
Fluorene	ND		ug/kg	180	--	1
Phenanthrene	120		ug/kg	110	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	150	--	1
Pyrene	140		ug/kg	110	--	1
Aniline	ND		ug/kg	220	--	1
4-Chloroaniline	ND		ug/kg	180	--	1
Dibenzofuran	ND		ug/kg	180	--	1
2-Methylnaphthalene	ND		ug/kg	220	--	1
Acetophenone	ND		ug/kg	180	--	1
2,4,6-Trichlorophenol	ND		ug/kg	110	--	1
2-Chlorophenol	ND		ug/kg	180	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	180	--	1
2-Nitrophenol	ND		ug/kg	390	--	1
4-Nitrophenol	ND		ug/kg	260	--	1
2,4-Dinitrophenol	ND		ug/kg	880	--	1
Pentachlorophenol	ND		ug/kg	360	--	1
Phenol	ND		ug/kg	180	--	1
2-Methylphenol	ND		ug/kg	180	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	--	1
2,4,5-Trichlorophenol	ND		ug/kg	180	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		30-130
Phenol-d6	88		30-130
Nitrobenzene-d5	80		30-130
2-Fluorobiphenyl	78		30-130
2,4,6-Tribromophenol	99		30-130
4-Terphenyl-d14	72		30-130



**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-02  
**Client ID:** CS-2-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 97,8270D  
**Analytical Date:** 01/09/15 18:17  
**Analyst:** HL  
**Percent Solids:** 85%

**Date Collected:** 01/05/15 09:45  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 01/08/15 16:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	160	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	--	1
Hexachlorobenzene	ND		ug/kg	120	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	170	--	1
2-Chloronaphthalene	ND		ug/kg	190	--	1
1,2-Dichlorobenzene	ND		ug/kg	190	--	1
1,3-Dichlorobenzene	ND		ug/kg	190	--	1
1,4-Dichlorobenzene	ND		ug/kg	190	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	--	1
2,4-Dinitrotoluene	ND		ug/kg	190	--	1
2,6-Dinitrotoluene	ND		ug/kg	190	--	1
Azobenzene	ND		ug/kg	190	--	1
Fluoranthene	ND		ug/kg	120	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	230	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	--	1
Hexachlorobutadiene	ND		ug/kg	190	--	1
Hexachloroethane	ND		ug/kg	160	--	1
Isophorone	ND		ug/kg	170	--	1
Naphthalene	ND		ug/kg	190	--	1
Nitrobenzene	ND		ug/kg	170	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	190	--	1
Butyl benzyl phthalate	ND		ug/kg	190	--	1
Di-n-butylphthalate	ND		ug/kg	190	--	1
Di-n-octylphthalate	ND		ug/kg	190	--	1
Diethyl phthalate	ND		ug/kg	190	--	1
Dimethyl phthalate	ND		ug/kg	190	--	1
Benzo(a)anthracene	ND		ug/kg	120	--	1
Benzo(a)pyrene	ND		ug/kg	160	--	1
Benzo(b)fluoranthene	ND		ug/kg	120	--	1

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS****Lab ID:** L1500186-02**Date Collected:** 01/05/15 09:45**Client ID:** CS-2-SS**Date Received:** 01/06/15**Sample Location:** FRAMINGHAM, MA**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	ND		ug/kg	120	--	1
Chrysene	ND		ug/kg	120	--	1
Acenaphthylene	ND		ug/kg	160	--	1
Anthracene	ND		ug/kg	120	--	1
Benzo(ghi)perylene	ND		ug/kg	160	--	1
Fluorene	ND		ug/kg	190	--	1
Phenanthrene	ND		ug/kg	120	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	160	--	1
Pyrene	ND		ug/kg	120	--	1
Aniline	ND		ug/kg	230	--	1
4-Chloroaniline	ND		ug/kg	190	--	1
Dibenzofuran	ND		ug/kg	190	--	1
2-Methylnaphthalene	ND		ug/kg	230	--	1
Acetophenone	ND		ug/kg	190	--	1
2,4,6-Trichlorophenol	ND		ug/kg	120	--	1
2-Chlorophenol	ND		ug/kg	190	--	1
2,4-Dichlorophenol	ND		ug/kg	170	--	1
2,4-Dimethylphenol	ND		ug/kg	190	--	1
2-Nitrophenol	ND		ug/kg	420	--	1
4-Nitrophenol	ND		ug/kg	270	--	1
2,4-Dinitrophenol	ND		ug/kg	930	--	1
Pentachlorophenol	ND		ug/kg	390	--	1
Phenol	ND		ug/kg	190	--	1
2-Methylphenol	ND		ug/kg	190	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	--	1
2,4,5-Trichlorophenol	ND		ug/kg	190	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	85		30-130
Phenol-d6	89		30-130
Nitrobenzene-d5	82		30-130
2-Fluorobiphenyl	74		30-130
2,4,6-Tribromophenol	100		30-130
4-Terphenyl-d14	66		30-130

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-03  
 Client ID: CS-3-SS  
 Sample Location: FRAMINGHAM, MA  
 Matrix: Soil  
 Analytical Method: 97,8270D  
 Analytical Date: 01/09/15 18:43  
 Analyst: HL  
 Percent Solids: 90%

Date Collected: 01/05/15 15:15  
 Date Received: 01/06/15  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 01/08/15 16:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	150	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	--	1
Hexachlorobenzene	ND		ug/kg	110	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	--	1
2-Chloronaphthalene	ND		ug/kg	180	--	1
1,2-Dichlorobenzene	ND		ug/kg	180	--	1
1,3-Dichlorobenzene	ND		ug/kg	180	--	1
1,4-Dichlorobenzene	ND		ug/kg	180	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	--	1
2,4-Dinitrotoluene	ND		ug/kg	180	--	1
2,6-Dinitrotoluene	ND		ug/kg	180	--	1
Azobenzene	ND		ug/kg	180	--	1
Fluoranthene	ND		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	--	1
Hexachlorobutadiene	ND		ug/kg	180	--	1
Hexachloroethane	ND		ug/kg	150	--	1
Isophorone	ND		ug/kg	160	--	1
Naphthalene	ND		ug/kg	180	--	1
Nitrobenzene	ND		ug/kg	160	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	--	1
Butyl benzyl phthalate	ND		ug/kg	180	--	1
Di-n-butylphthalate	ND		ug/kg	180	--	1
Di-n-octylphthalate	ND		ug/kg	180	--	1
Diethyl phthalate	ND		ug/kg	180	--	1
Dimethyl phthalate	ND		ug/kg	180	--	1
Benzo(a)anthracene	ND		ug/kg	110	--	1
Benzo(a)pyrene	ND		ug/kg	150	--	1
Benzo(b)fluoranthene	ND		ug/kg	110	--	1

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS****Lab ID:** L1500186-03**Date Collected:** 01/05/15 15:15**Client ID:** CS-3-SS**Date Received:** 01/06/15**Sample Location:** FRAMINGHAM, MA**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	ND		ug/kg	110	--	1
Chrysene	ND		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	150	--	1
Anthracene	ND		ug/kg	110	--	1
Benzo(ghi)perylene	ND		ug/kg	150	--	1
Fluorene	ND		ug/kg	180	--	1
Phenanthrene	ND		ug/kg	110	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	150	--	1
Pyrene	ND		ug/kg	110	--	1
Aniline	ND		ug/kg	220	--	1
4-Chloroaniline	ND		ug/kg	180	--	1
Dibenzofuran	ND		ug/kg	180	--	1
2-Methylnaphthalene	ND		ug/kg	220	--	1
Acetophenone	ND		ug/kg	180	--	1
2,4,6-Trichlorophenol	ND		ug/kg	110	--	1
2-Chlorophenol	ND		ug/kg	180	--	1
2,4-Dichlorophenol	ND		ug/kg	160	--	1
2,4-Dimethylphenol	ND		ug/kg	180	--	1
2-Nitrophenol	ND		ug/kg	400	--	1
4-Nitrophenol	ND		ug/kg	260	--	1
2,4-Dinitrophenol	ND		ug/kg	880	--	1
Pentachlorophenol	ND		ug/kg	360	--	1
Phenol	ND		ug/kg	180	--	1
2-Methylphenol	ND		ug/kg	180	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	--	1
2,4,5-Trichlorophenol	ND		ug/kg	180	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	96		30-130
Phenol-d6	102		30-130
Nitrobenzene-d5	94		30-130
2-Fluorobiphenyl	95		30-130
2,4,6-Tribromophenol	119		30-130
4-Terphenyl-d14	81		30-130

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-04  
 Client ID: CS-4-SS  
 Sample Location: FRAMINGHAM, MA  
 Matrix: Soil  
 Analytical Method: 97,8270D  
 Analytical Date: 01/09/15 19:09  
 Analyst: HL  
 Percent Solids: 89%

Date Collected: 01/05/15 16:05  
 Date Received: 01/06/15  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 01/08/15 16:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	150	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	--	1
Hexachlorobenzene	ND		ug/kg	110	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	170	--	1
2-Chloronaphthalene	ND		ug/kg	190	--	1
1,2-Dichlorobenzene	ND		ug/kg	190	--	1
1,3-Dichlorobenzene	ND		ug/kg	190	--	1
1,4-Dichlorobenzene	ND		ug/kg	190	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	--	1
2,4-Dinitrotoluene	ND		ug/kg	190	--	1
2,6-Dinitrotoluene	ND		ug/kg	190	--	1
Azobenzene	ND		ug/kg	190	--	1
Fluoranthene	ND		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	--	1
Hexachlorobutadiene	ND		ug/kg	190	--	1
Hexachloroethane	ND		ug/kg	150	--	1
Isophorone	ND		ug/kg	170	--	1
Naphthalene	ND		ug/kg	190	--	1
Nitrobenzene	ND		ug/kg	170	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	190	--	1
Butyl benzyl phthalate	ND		ug/kg	190	--	1
Di-n-butylphthalate	ND		ug/kg	190	--	1
Di-n-octylphthalate	ND		ug/kg	190	--	1
Diethyl phthalate	ND		ug/kg	190	--	1
Dimethyl phthalate	ND		ug/kg	190	--	1
Benzo(a)anthracene	ND		ug/kg	110	--	1
Benzo(a)pyrene	ND		ug/kg	150	--	1
Benzo(b)fluoranthene	ND		ug/kg	110	--	1

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-04

Date Collected: 01/05/15 16:05

Client ID: CS-4-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	ND		ug/kg	110	--	1
Chrysene	ND		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	150	--	1
Anthracene	ND		ug/kg	110	--	1
Benzo(ghi)perylene	ND		ug/kg	150	--	1
Fluorene	ND		ug/kg	190	--	1
Phenanthrene	ND		ug/kg	110	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	150	--	1
Pyrene	ND		ug/kg	110	--	1
Aniline	ND		ug/kg	220	--	1
4-Chloroaniline	ND		ug/kg	190	--	1
Dibenzofuran	ND		ug/kg	190	--	1
2-Methylnaphthalene	ND		ug/kg	220	--	1
Acetophenone	ND		ug/kg	190	--	1
2,4,6-Trichlorophenol	ND		ug/kg	110	--	1
2-Chlorophenol	ND		ug/kg	190	--	1
2,4-Dichlorophenol	ND		ug/kg	170	--	1
2,4-Dimethylphenol	ND		ug/kg	190	--	1
2-Nitrophenol	ND		ug/kg	400	--	1
4-Nitrophenol	ND		ug/kg	260	--	1
2,4-Dinitrophenol	ND		ug/kg	890	--	1
Pentachlorophenol	ND		ug/kg	370	--	1
Phenol	ND		ug/kg	190	--	1
2-Methylphenol	ND		ug/kg	190	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	270	--	1
2,4,5-Trichlorophenol	ND		ug/kg	190	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		30-130
Phenol-d6	79		30-130
Nitrobenzene-d5	71		30-130
2-Fluorobiphenyl	71		30-130
2,4,6-Tribromophenol	97		30-130
4-Terphenyl-d14	65		30-130



Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8270D  
 Analytical Date: 01/09/15 16:08  
 Analyst: HL

Extraction Method: EPA 3546  
 Extraction Date: 01/08/15 16:29

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-04 Batch: WG754412-1					
Acenaphthene	ND		ug/kg	130	--
1,2,4-Trichlorobenzene	ND		ug/kg	160	--
Hexachlorobenzene	ND		ug/kg	97	--
Bis(2-chloroethyl)ether	ND		ug/kg	140	--
2-Chloronaphthalene	ND		ug/kg	160	--
1,2-Dichlorobenzene	ND		ug/kg	160	--
1,3-Dichlorobenzene	ND		ug/kg	160	--
1,4-Dichlorobenzene	ND		ug/kg	160	--
3,3'-Dichlorobenzidine	ND		ug/kg	160	--
2,4-Dinitrotoluene	ND		ug/kg	160	--
2,6-Dinitrotoluene	ND		ug/kg	160	--
Azobenzene	ND		ug/kg	160	--
Fluoranthene	ND		ug/kg	97	--
4-Bromophenyl phenyl ether	ND		ug/kg	160	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	190	--
Bis(2-chloroethoxy)methane	ND		ug/kg	170	--
Hexachlorobutadiene	ND		ug/kg	160	--
Hexachloroethane	ND		ug/kg	130	--
Isophorone	ND		ug/kg	140	--
Naphthalene	ND		ug/kg	160	--
Nitrobenzene	ND		ug/kg	140	--
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	160	--
Butyl benzyl phthalate	ND		ug/kg	160	--
Di-n-butylphthalate	ND		ug/kg	160	--
Di-n-octylphthalate	ND		ug/kg	160	--
Diethyl phthalate	ND		ug/kg	160	--
Dimethyl phthalate	ND		ug/kg	160	--
Benzo(a)anthracene	ND		ug/kg	97	--
Benzo(a)pyrene	ND		ug/kg	130	--

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8270D  
 Analytical Date: 01/09/15 16:08  
 Analyst: HL

Extraction Method: EPA 3546  
 Extraction Date: 01/08/15 16:29

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-04 Batch: WG754412-1					
Benzo(b)fluoranthene	ND		ug/kg	97	--
Benzo(k)fluoranthene	ND		ug/kg	97	--
Chrysene	ND		ug/kg	97	--
Acenaphthylene	ND		ug/kg	130	--
Anthracene	ND		ug/kg	97	--
Benzo(ghi)perylene	ND		ug/kg	130	--
Fluorene	ND		ug/kg	160	--
Phenanthrene	ND		ug/kg	97	--
Dibenzo(a,h)anthracene	ND		ug/kg	97	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	130	--
Pyrene	ND		ug/kg	97	--
Aniline	ND		ug/kg	190	--
4-Chloroaniline	ND		ug/kg	160	--
Dibenzofuran	ND		ug/kg	160	--
2-Methylnaphthalene	ND		ug/kg	190	--
Acetophenone	ND		ug/kg	160	--
2,4,6-Trichlorophenol	ND		ug/kg	97	--
2-Chlorophenol	ND		ug/kg	160	--
2,4-Dichlorophenol	ND		ug/kg	140	--
2,4-Dimethylphenol	ND		ug/kg	160	--
2-Nitrophenol	ND		ug/kg	350	--
4-Nitrophenol	ND		ug/kg	230	--
2,4-Dinitrophenol	ND		ug/kg	780	--
Pentachlorophenol	ND		ug/kg	320	--
Phenol	ND		ug/kg	160	--
2-Methylphenol	ND		ug/kg	160	--
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	--
2,4,5-Trichlorophenol	ND		ug/kg	160	--

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8270D  
Analytical Date: 01/09/15 16:08  
Analyst: HL

Extraction Method: EPA 3546  
Extraction Date: 01/08/15 16:29

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-04 Batch: WG754412-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	91		30-130
Phenol-d6	96		30-130
Nitrobenzene-d5	86		30-130
2-Fluorobiphenyl	98		30-130
2,4,6-Tribromophenol	112		30-130
4-Terphenyl-d14	113		30-130

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04 Batch: WG754412-2 WG754412-3								
Acenaphthene	88		95		40-140	8		30
1,2,4-Trichlorobenzene	88		96		40-140	9		30
Hexachlorobenzene	94		96		40-140	2		30
Bis(2-chloroethyl)ether	81		86		40-140	6		30
2-Chloronaphthalene	90		94		40-140	4		30
1,2-Dichlorobenzene	82		86		40-140	5		30
1,3-Dichlorobenzene	80		86		40-140	7		30
1,4-Dichlorobenzene	81		84		40-140	4		30
3,3'-Dichlorobenzidine	92		92		40-140	0		30
2,4-Dinitrotoluene	94		98		40-140	4		30
2,6-Dinitrotoluene	92		97		40-140	5		30
Azobenzene	97		101		40-140	4		30
Fluoranthene	97		103		40-140	6		30
4-Bromophenyl phenyl ether	94		99		40-140	5		30
Bis(2-chloroisopropyl)ether	78		82		40-140	5		30
Bis(2-chloroethoxy)methane	87		92		40-140	6		30
Hexachlorobutadiene	88		92		40-140	4		30
Hexachloroethane	79		84		40-140	6		30
Isophorone	86		88		40-140	2		30
Naphthalene	84		90		40-140	7		30
Nitrobenzene	80		89		40-140	11		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04 Batch: WG754412-2 WG754412-3								
Bis(2-Ethylhexyl)phthalate	105		107		40-140	2		30
Butyl benzyl phthalate	96		99		40-140	3		30
Di-n-butylphthalate	96		100		40-140	4		30
Di-n-octylphthalate	98		101		40-140	3		30
Diethyl phthalate	93		97		40-140	4		30
Dimethyl phthalate	91		97		40-140	6		30
Benzo(a)anthracene	95		100		40-140	5		30
Benzo(a)pyrene	94		99		40-140	5		30
Benzo(b)fluoranthene	91		98		40-140	7		30
Benzo(k)fluoranthene	96		99		40-140	3		30
Chrysene	96		101		40-140	5		30
Acenaphthylene	90		97		40-140	7		30
Anthracene	97		104		40-140	7		30
Benzo(ghi)perylene	92		100		40-140	8		30
Fluorene	91		96		40-140	5		30
Phenanthrene	92		100		40-140	8		30
Dibenzo(a,h)anthracene	93		100		40-140	7		30
Indeno(1,2,3-cd)Pyrene	94		99		40-140	5		30
Pyrene	96		102		40-140	6		30
Aniline	67		69		40-140	3		30
4-Chloroaniline	83		90		40-140	8		30

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** ADESA BOSTON

**Project Number:** 143-1298-13008

**Lab Number:** L1500186

**Report Date:** 01/13/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04 Batch: WG754412-2 WG754412-3								
Dibenzofuran	94		100		40-140	6		30
2-Methylnaphthalene	90		96		40-140	6		30
Acetophenone	93		96		40-140	3		30
2,4,6-Trichlorophenol	105		110		30-130	5		30
2-Chlorophenol	98		103		30-130	5		30
2,4-Dichlorophenol	102		112		30-130	9		30
2,4-Dimethylphenol	102		107		30-130	5		30
2-Nitrophenol	100		104		30-130	4		30
4-Nitrophenol	107		114		30-130	6		30
2,4-Dinitrophenol	86		98		30-130	13		30
Pentachlorophenol	98		108		30-130	10		30
Phenol	97		103		30-130	6		30
2-Methylphenol	100		108		30-130	8		30
3-Methylphenol/4-Methylphenol	102		106		30-130	4		30
2,4,5-Trichlorophenol	100		107		30-130	7		30



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-04 Batch: WG754412-2 WG754412-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	97		98		30-130
Phenol-d6	101		104		30-130
Nitrobenzene-d5	92		96		30-130
2-Fluorobiphenyl	97		99		30-130
2,4,6-Tribromophenol	103		108		30-130
4-Terphenyl-d14	105		106		30-130

# **PETROLEUM HYDROCARBONS**

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-01  
**Client ID:** CS-1-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8015C(M)  
**Analytical Date:** 01/08/15 21:38  
**Analyst:** AR  
**Percent Solids:** 90%

**Date Collected:** 01/05/15 12:15  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 01/08/15 00:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Petroleum Hydrocarbon Quantitation - Westborough Lab						
--	--	--	--	--	--	--

TPH	89000		ug/kg	36100	--	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	94		40-140

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-02  
**Client ID:** CS-2-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8015C(M)  
**Analytical Date:** 01/08/15 17:16  
**Analyst:** AR  
**Percent Solids:** 85%

**Date Collected:** 01/05/15 09:45  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 01/08/15 00:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Petroleum Hydrocarbon Quantitation - Westborough Lab						
--	--	--	--	--	--	--

TPH	ND		ug/kg	38200	--	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	90		40-140

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-03  
**Client ID:** CS-3-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8015C(M)  
**Analytical Date:** 01/08/15 17:49  
**Analyst:** AR  
**Percent Solids:** 90%

**Date Collected:** 01/05/15 15:15  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 01/08/15 00:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Petroleum Hydrocarbon Quantitation - Westborough Lab						
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TPH	ND		ug/kg	35800	--	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	84		40-140

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-04  
**Client ID:** CS-4-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 1,8015C(M)  
**Analytical Date:** 01/08/15 16:34  
**Analyst:** AR  
**Percent Solids:** 89%

**Date Collected:** 01/05/15 16:05  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 01/08/15 00:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Petroleum Hydrocarbon Quantitation - Westborough Lab						
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TPH	ND		ug/kg	36600	--	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	85		40-140



**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**Method Blank Analysis**  
**Batch Quality Control****Analytical Method:** 1,8015C(M)**Extraction Method:** EPA 3546**Analytical Date:** 01/08/15 12:02**Extraction Date:** 01/08/15 00:42**Analyst:** AR

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Quantitation - Westborough Lab for sample(s): 01-04 Batch: WG754125-1					
TPH	ND		ug/kg	31500	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	91		40-140

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbon Quantitation - Westborough Lab Associated sample(s): 01-04 Batch: WG754125-2								
TPH	90		-		40-140	-		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	91				40-140

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** ADESA BOSTON

**Project Number:** 143-1298-13008

**Lab Number:** L1500186

**Report Date:** 01/13/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Petroleum Hydrocarbon Quantitation - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG754125-3 QC Sample: L1500123-01 Client ID: DUP Sample						
TPH	538000	518000	ug/kg	4		40

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	88		77		40-140

# PCBS

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-01  
**Client ID:** CS-1-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 97,8082  
**Analytical Date:** 01/08/15 18:40  
**Analyst:** JT  
**Percent Solids:** 90%

**Date Collected:** 01/05/15 12:15  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 01/07/15 15:32  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 01/07/15  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 01/07/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.0	--	1	A
Aroclor 1221	ND		ug/kg	37.0	--	1	A
Aroclor 1232	ND		ug/kg	37.0	--	1	A
Aroclor 1242	ND		ug/kg	37.0	--	1	A
Aroclor 1248	ND		ug/kg	37.0	--	1	A
Aroclor 1254	ND		ug/kg	37.0	--	1	A
Aroclor 1260	ND		ug/kg	37.0	--	1	A
Aroclor 1262	ND		ug/kg	37.0	--	1	A
Aroclor 1268	ND		ug/kg	37.0	--	1	A
PCBs, Total	ND		ug/kg	37.0	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	55		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	65		30-150	B

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-02  
**Client ID:** CS-2-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 97,8082  
**Analytical Date:** 01/08/15 18:54  
**Analyst:** JT  
**Percent Solids:** 85%

**Date Collected:** 01/05/15 09:45  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 01/07/15 15:32  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 01/07/15  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 01/07/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	38.0	--	1	A
Aroclor 1221	ND		ug/kg	38.0	--	1	A
Aroclor 1232	ND		ug/kg	38.0	--	1	A
Aroclor 1242	ND		ug/kg	38.0	--	1	A
Aroclor 1248	ND		ug/kg	38.0	--	1	A
Aroclor 1254	ND		ug/kg	38.0	--	1	A
Aroclor 1260	ND		ug/kg	38.0	--	1	A
Aroclor 1262	ND		ug/kg	38.0	--	1	A
Aroclor 1268	ND		ug/kg	38.0	--	1	A
PCBs, Total	ND		ug/kg	38.0	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	62		30-150	B

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-03  
**Client ID:** CS-3-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 97,8082  
**Analytical Date:** 01/08/15 19:07  
**Analyst:** JT  
**Percent Solids:** 90%

**Date Collected:** 01/05/15 15:15  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 01/07/15 15:32  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 01/07/15  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 01/07/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	35.9	--	1	A
Aroclor 1221	ND		ug/kg	35.9	--	1	A
Aroclor 1232	ND		ug/kg	35.9	--	1	A
Aroclor 1242	ND		ug/kg	35.9	--	1	A
Aroclor 1248	ND		ug/kg	35.9	--	1	A
Aroclor 1254	ND		ug/kg	35.9	--	1	A
Aroclor 1260	ND		ug/kg	35.9	--	1	A
Aroclor 1262	ND		ug/kg	35.9	--	1	A
Aroclor 1268	ND		ug/kg	35.9	--	1	A
PCBs, Total	ND		ug/kg	35.9	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	71		30-150	A
2,4,5,6-Tetrachloro-m-xylene	84		30-150	B
Decachlorobiphenyl	76		30-150	B



**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

**Lab ID:** L1500186-04  
**Client ID:** CS-4-SS  
**Sample Location:** FRAMINGHAM, MA  
**Matrix:** Soil  
**Analytical Method:** 97,8082  
**Analytical Date:** 01/08/15 19:20  
**Analyst:** JT  
**Percent Solids:** 89%

**Date Collected:** 01/05/15 16:05  
**Date Received:** 01/06/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 01/07/15 15:32  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 01/07/15  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 01/07/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	36.6	--	1	A
Aroclor 1221	ND		ug/kg	36.6	--	1	A
Aroclor 1232	ND		ug/kg	36.6	--	1	A
Aroclor 1242	ND		ug/kg	36.6	--	1	A
Aroclor 1248	ND		ug/kg	36.6	--	1	A
Aroclor 1254	ND		ug/kg	36.6	--	1	A
Aroclor 1260	ND		ug/kg	36.6	--	1	A
Aroclor 1262	ND		ug/kg	36.6	--	1	A
Aroclor 1268	ND		ug/kg	36.6	--	1	A
PCBs, Total	ND		ug/kg	36.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	59		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	63		30-150	B

**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8082  
 Analytical Date: 01/08/15 05:40  
 Analyst: JT

Extraction Method: EPA 3546  
 Extraction Date: 01/07/15 14:18  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 01/07/15  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 01/07/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
MCP Polychlorinated Biphenyls - Westborough Lab for sample(s): 01-04 Batch: WG753995-1						
Aroclor 1016	ND		ug/kg	32.2	--	A
Aroclor 1221	ND		ug/kg	32.2	--	A
Aroclor 1232	ND		ug/kg	32.2	--	A
Aroclor 1242	ND		ug/kg	32.2	--	A
Aroclor 1248	ND		ug/kg	32.2	--	A
Aroclor 1254	ND		ug/kg	32.2	--	A
Aroclor 1260	ND		ug/kg	32.2	--	A
Aroclor 1262	ND		ug/kg	32.2	--	A
Aroclor 1268	ND		ug/kg	32.2	--	A
PCBs, Total	ND		ug/kg	32.2	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		30-150	A
Decachlorobiphenyl	104		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	91		30-150	B

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** ADESA BOSTON

**Project Number:** 143-1298-13008

**Lab Number:** L1500186

**Report Date:** 01/13/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
MCP Polychlorinated Biphenyls - Westborough Lab Associated sample(s): 01-04 Batch: WG753995-2 WG753995-3									
Aroclor 1016	60		64		40-140	6		30	A
Aroclor 1260	59		61		40-140	3		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		63		30-150	A
Decachlorobiphenyl	89		93		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		68		30-150	B
Decachlorobiphenyl	76		80		30-150	B

## METALS

Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-01

Date Collected: 01/05/15 12:15

Client ID: CS-1-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	5.5		mg/kg	0.42	--	1	01/12/15 11:03	01/12/15 15:12	EPA 3050B	97,6010C	BC
Cadmium, Total	ND		mg/kg	0.42	--	1	01/12/15 11:03	01/12/15 15:12	EPA 3050B	97,6010C	BC
Chromium, Total	57		mg/kg	0.42	--	1	01/12/15 11:03	01/12/15 15:12	EPA 3050B	97,6010C	BC
Lead, Total	2.5		mg/kg	2.1	--	1	01/12/15 11:03	01/12/15 15:12	EPA 3050B	97,6010C	BC
Mercury, Total	ND		mg/kg	0.073	--	1	01/08/15 06:01	01/09/15 16:00	EPA 7471B	97,7471B	MC



Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-02

Date Collected: 01/05/15 09:45

Client ID: CS-2-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	4.8		mg/kg	0.45	--	1	01/12/15 11:03	01/12/15 15:35	EPA 3050B	97,6010C	BC
Cadmium, Total	ND		mg/kg	0.45	--	1	01/12/15 11:03	01/12/15 15:35	EPA 3050B	97,6010C	BC
Chromium, Total	20		mg/kg	0.45	--	1	01/12/15 11:03	01/12/15 15:35	EPA 3050B	97,6010C	BC
Lead, Total	3.0		mg/kg	2.2	--	1	01/12/15 11:03	01/12/15 15:35	EPA 3050B	97,6010C	BC
Mercury, Total	ND		mg/kg	0.076	--	1	01/08/15 06:01	01/09/15 16:06	EPA 7471B	97,7471B	MC



**Project Name:** ADESA BOSTON**Lab Number:** L1500186**Project Number:** 143-1298-13008**Report Date:** 01/13/15**SAMPLE RESULTS**

Lab ID: L1500186-03

Date Collected: 01/05/15 15:15

Client ID: CS-3-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	5.3		mg/kg	0.44	--	1	01/12/15 11:03	01/12/15 15:39	EPA 3050B	97,6010C	BC
Cadmium, Total	ND		mg/kg	0.44	--	1	01/12/15 11:03	01/12/15 15:39	EPA 3050B	97,6010C	BC
Chromium, Total	31		mg/kg	0.44	--	1	01/12/15 11:03	01/12/15 15:39	EPA 3050B	97,6010C	BC
Lead, Total	ND		mg/kg	2.2	--	1	01/12/15 11:03	01/12/15 15:39	EPA 3050B	97,6010C	BC
Mercury, Total	ND		mg/kg	0.077	--	1	01/08/15 06:01	01/09/15 16:07	EPA 7471B	97,7471B	MC



Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-04

Date Collected: 01/05/15 16:05

Client ID: CS-4-SS

Date Received: 01/06/15

Sample Location: FRAMINGHAM, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	7.0		mg/kg	0.44	--	1	01/12/15 11:03	01/12/15 15:43	EPA 3050B	97,6010C	BC
Cadmium, Total	ND		mg/kg	0.44	--	1	01/12/15 11:03	01/12/15 15:43	EPA 3050B	97,6010C	BC
Chromium, Total	38		mg/kg	0.44	--	1	01/12/15 11:03	01/12/15 15:43	EPA 3050B	97,6010C	BC
Lead, Total	ND		mg/kg	2.2	--	1	01/12/15 11:03	01/12/15 15:43	EPA 3050B	97,6010C	BC
Mercury, Total	ND		mg/kg	0.078	--	1	01/08/15 06:01	01/13/15 10:41	EPA 7471B	97,7471B	MC





Project Name: ADESA BOSTON

Lab Number: L1500186

Project Number: 143-1298-13008

Report Date: 01/13/15

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01-03 Batch: WG753792-1										
Mercury, Total	ND		mg/kg	0.083	--	1	01/08/15 06:01	01/09/15 15:29	97,7471B	MC

### Prep Information

Digestion Method: EPA 7471B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 04 Batch: WG753831-1										
Mercury, Total	ND		mg/kg	0.083	--	1	01/08/15 06:01	01/13/15 10:33	97,7471B	MC

### Prep Information

Digestion Method: EPA 7471B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01-04 Batch: WG755007-1										
Arsenic, Total	ND		mg/kg	0.40	--	1	01/12/15 11:03	01/12/15 14:49	97,6010C	BC
Cadmium, Total	ND		mg/kg	0.40	--	1	01/12/15 11:03	01/12/15 14:49	97,6010C	BC
Chromium, Total	ND		mg/kg	0.40	--	1	01/12/15 11:03	01/12/15 14:49	97,6010C	BC
Lead, Total	ND		mg/kg	2.0	--	1	01/12/15 11:03	01/12/15 14:49	97,6010C	BC

### Prep Information

Digestion Method: EPA 3050B

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** ADESA BOSTON

**Project Number:** 143-1298-13008

**Lab Number:** L1500186

**Report Date:** 01/13/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG753792-2 WG753792-3 SRM Lot Number: D083-540								
Mercury, Total	112		108		75-126	4		30
MCP Total Metals - Westborough Lab Associated sample(s): 04 Batch: WG753831-2 WG753831-3 SRM Lot Number: D083-540								
Mercury, Total	110		106		75-126	4		30
MCP Total Metals - Westborough Lab Associated sample(s): 01-04 Batch: WG755007-2 WG755007-3 SRM Lot Number: D083-540								
Arsenic, Total	106		115		78-122	8		30
Cadmium, Total	100		101		82-118	1		30
Chromium, Total	98		98		79-121	0		30
Lead, Total	95		101		81-119	6		30

# **INORGANICS & MISCELLANEOUS**

**Project Name:** ADESA BOSTON**Project Number:** 143-1298-13008**Lab Number:** L1500186**Report Date:** 01/13/15**SAMPLE RESULTS**

Lab ID: L1500186-01  
Client ID: CS-1-SS  
Sample Location: FRAMINGHAM, MA  
Matrix: Soil

Date Collected: 01/05/15 12:15  
Date Received: 01/06/15  
Field Prep: Not Specified

**Test Material Information**

Source of Material: Unknown  
Description of Material: Non-Metallic - Dry Soil  
Particle Size: Coarse  
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	01/07/15 16:52	1,1030	SB



Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

**SAMPLE RESULTS**

Lab ID: L1500186-02

Client ID: CS-2-SS

Sample Location: FRAMINGHAM, MA

Matrix: Soil

Date Collected: 01/05/15 09:45

Date Received: 01/06/15

Field Prep: Not Specified

**Test Material Information**

Source of Material: Unknown

Description of Material: Non-Metallic - Damp Soil

Particle Size: Medium

Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	01/07/15 16:52	1,1030	SB



Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

**SAMPLE RESULTS**

Lab ID: L1500186-03

Client ID: CS-3-SS

Sample Location: FRAMINGHAM, MA

Matrix: Soil

Date Collected: 01/05/15 15:15

Date Received: 01/06/15

Field Prep: Not Specified

**Test Material Information**

Source of Material: Unknown

Description of Material: Non-Metallic - Dry Soil

Particle Size: Medium

Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	01/07/15 16:52	1,1030	SB



**Project Name:** ADESA BOSTON**Project Number:** 143-1298-13008**Lab Number:** L1500186**Report Date:** 01/13/15**SAMPLE RESULTS****Lab ID:** L1500186-04**Client ID:** CS-4-SS**Sample Location:** FRAMINGHAM, MA**Matrix:** Soil**Date Collected:** 01/05/15 16:05**Date Received:** 01/06/15**Field Prep:** Not Specified**Test Material Information****Source of Material:** Unknown**Description of Material:** Non-Metallic - Dry Soil**Particle Size:** Medium**Preliminary Burning Time (sec):** 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	01/07/15 16:52	1,1030	SB



Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-01  
 Client ID: CS-1-SS  
 Sample Location: FRAMINGHAM, MA  
 Matrix: Soil

Date Collected: 01/05/15 12:15  
 Date Received: 01/06/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance	ND		umhos/cm	10	--	1	-	01/07/15 22:40	1,9050A	MR
Solids, Total	89.8		%	0.100	NA	1	-	01/06/15 23:00	30,2540G	RT
pH (H)	7.5		SU	-	NA	1	-	01/06/15 21:40	1,9045D	MR
Cyanide, Reactive	ND		mg/kg	10	--	1	01/08/15 16:15	01/08/15 18:20	1,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	--	1	01/08/15 16:15	01/08/15 18:12	1,7.3	TL





Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-02  
 Client ID: CS-2-SS  
 Sample Location: FRAMINGHAM, MA  
 Matrix: Soil

Date Collected: 01/05/15 09:45  
 Date Received: 01/06/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance	12		umhos/cm	10	--	1	-	01/07/15 22:40	1,9050A	MR
Solids, Total	85.1		%	0.100	NA	1	-	01/06/15 23:00	30,2540G	RT
pH (H)	6.4		SU	-	NA	1	-	01/06/15 21:40	1,9045D	MR
Cyanide, Reactive	ND		mg/kg	10	--	1	01/08/15 16:15	01/08/15 18:20	1,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	--	1	01/08/15 16:15	01/08/15 18:12	1,7.3	TL



Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-03

Client ID: CS-3-SS

Sample Location: FRAMINGHAM, MA

Matrix: Soil

Date Collected: 01/05/15 15:15

Date Received: 01/06/15

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance	16		umhos/cm	10	--	1	-	01/07/15 22:40	1,9050A	MR
Solids, Total	89.8		%	0.100	NA	1	-	01/06/15 23:00	30,2540G	RT
pH (H)	6.9		SU	-	NA	1	-	01/06/15 21:40	1,9045D	MR
Cyanide, Reactive	ND		mg/kg	10	--	1	01/08/15 16:15	01/08/15 18:20	1,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	--	1	01/08/15 16:15	01/08/15 18:12	1,7.3	TL



Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

## SAMPLE RESULTS

Lab ID: L1500186-04  
 Client ID: CS-4-SS  
 Sample Location: FRAMINGHAM, MA  
 Matrix: Soil

Date Collected: 01/05/15 16:05  
 Date Received: 01/06/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance	14		umhos/cm	10	--	1	-	01/07/15 22:40	1,9050A	MR
Solids, Total	88.6		%	0.100	NA	1	-	01/06/15 23:00	30,2540G	RT
pH (H)	7.6		SU	-	NA	1	-	01/06/15 21:40	1,9045D	MR
Cyanide, Reactive	ND		mg/kg	10	--	1	01/08/15 16:15	01/08/15 18:21	1,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	--	1	01/08/15 16:15	01/08/15 18:13	1,7.3	TL



**Project Name:** ADESA BOSTON  
**Project Number:** 143-1298-13008

**Lab Number:** L1500186  
**Report Date:** 01/13/15

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG754395-1										
Cyanide, Reactive	ND		mg/kg	10	--	1	01/08/15 16:15	01/08/15 18:19	1,7.3	TL
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG754399-1										
Sulfide, Reactive	ND		mg/kg	10	--	1	01/08/15 16:15	01/08/15 18:11	1,7.3	TL

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** ADESA BOSTON

**Project Number:** 143-1298-13008

**Lab Number:** L1500186

**Report Date:** 01/13/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG753723-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG754111-1								
Specific Conductance	98		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG754395-2								
Cyanide, Reactive	54		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG754399-2								
Sulfide, Reactive	112		-		60-125	-		40

**Project Name:** ADESA BOSTON  
**Project Number:** 143-1298-13008

## Lab Duplicate Analysis

Batch Quality Control

**Lab Number:** L1500186  
**Report Date:** 01/13/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG753723-2 QC Sample: L1500164-01 Client ID: DUP Sample						
pH	7.3	7.3	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG753746-1 QC Sample: L1500164-01 Client ID: DUP Sample						
Solids, Total	82.8	81.6	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG754111-2 QC Sample: L1500186-01 Client ID: CS-1-SS						
Specific Conductance	ND	ND	umhos/cm	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG754395-3 QC Sample: L1500249-17 Client ID: DUP Sample						
Cyanide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG754399-3 QC Sample: L1500249-17 Client ID: DUP Sample						
Sulfide, Reactive	ND	ND	mg/kg	NC		40

Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 01/06/2015 20:18

## Cooler Information Custody Seal

## Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1500186-01A	Vial MeOH preserved	A	N/A	3.0	Y	Absent	MCP-8260HLW-10(14)
L1500186-01B	Vial water preserved	A	N/A	3.0	Y	Absent	MCP-8260HLW-10(14)
L1500186-01C	Vial water preserved	A	N/A	3.0	Y	Absent	MCP-8260HLW-10(14)
L1500186-01D	Glass 250ml/8oz unpreserved	A	N/A	3.0	Y	Absent	IGNIT-1030(14),MCP-8082-10(365),MCP-CR-6010T-10(180),REACTS(14),MCP-8270-10(14),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),COND-9050(28),MCP-PB-6010T-10(180)
L1500186-02A	Vial MeOH preserved	A	N/A	3.0	Y	Absent	MCP-8260HLW-10(14)
L1500186-02B	Vial water preserved	A	N/A	3.0	Y	Absent	MCP-8260HLW-10(14)
L1500186-02D	Glass 250ml/8oz unpreserved	A	N/A	3.0	Y	Absent	IGNIT-1030(14),MCP-8082-10(365),MCP-CR-6010T-10(180),REACTS(14),MCP-8270-10(14),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),COND-9050(28),MCP-PB-6010T-10(180)
L1500186-02E	Glass 250ml/8oz unpreserved	A	N/A	3.0	Y	Absent	IGNIT-1030(14),MCP-8082-10(365),MCP-CR-6010T-10(180),REACTS(14),MCP-8270-10(14),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),MCP-PB-6010T-10(180)
L1500186-03A	Vial MeOH preserved	A	N/A	3.0	Y	Absent	MCP-8260HLW-10(14)
L1500186-03B	Vial water preserved	A	N/A	3.0	Y	Absent	MCP-8260HLW-10(14)
L1500186-03C	Vial water preserved	A	N/A	3.0	Y	Absent	MCP-8260HLW-10(14)

\*Values in parentheses indicate holding time in days



Project Name: ADESA BOSTON

Project Number: 143-1298-13008

Lab Number: L1500186

Report Date: 01/13/15

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1500186-03D	Glass 250ml/8oz unpreserved	A	N/A	3.0	Y	Absent	IGNIT-1030(14),MCP-8082-10(365),MCP-CR-6010T-10(180),REACTS(14),MCP-8270-10(14),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),COND-9050(28),MCP-PB-6010T-10(180)
L1500186-03E	Glass 250ml/8oz unpreserved	A	N/A	3.0	Y	Absent	IGNIT-1030(14),MCP-8082-10(365),MCP-CR-6010T-10(180),REACTS(14),MCP-8270-10(14),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),MCP-PB-6010T-10(180)
L1500186-04A	Vial MeOH preserved	A	N/A	3.0	Y	Absent	MCP-8260HLW-10(14)
L1500186-04B	Vial water preserved	A	N/A	3.0	Y	Absent	MCP-8260HLW-10(14)
L1500186-04C	Vial water preserved	A	N/A	3.0	Y	Absent	MCP-8260HLW-10(14)
L1500186-04D	Glass 250ml/8oz unpreserved	A	N/A	3.0	Y	Absent	IGNIT-1030(14),MCP-8082-10(365),MCP-CR-6010T-10(180),REACTS(14),MCP-8270-10(14),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),COND-9050(28),MCP-PB-6010T-10(180)
L1500186-04E	Glass 250ml/8oz unpreserved	A	N/A	3.0	Y	Absent	IGNIT-1030(14),MCP-8082-10(365),MCP-CR-6010T-10(180),REACTS(14),MCP-8270-10(14),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),MCP-PB-6010T-10(180)

\*Values in parentheses indicate holding time in days





**Project Name:** ADESA BOSTON  
**Project Number:** 143-1298-13008

**Lab Number:** L1500186  
**Report Date:** 01/13/15

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**Report Format:** Data Usability Report



**Project Name:** ADESA BOSTON  
**Project Number:** 143-1298-13008

**Lab Number:** L1500186  
**Report Date:** 01/13/15

**Data Qualifiers**

- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** ADESA BOSTON  
**Project Number:** 143-1298-13008

**Lab Number:** L1500186  
**Report Date:** 01/13/15

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

Last revised December 16, 2014

**The following analytes are not included in our NELAP Scope of Accreditation:**

### **Westborough Facility**

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

**EPA 8260C:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

### **Mansfield Facility**

**EPA 8270D:** Biphenyl.

**EPA 2540D:** TSS

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:**

### ***Drinking Water***

**EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Tl; **EPA 200.7:** Ba, Be, Ca, Cd, Cr, Cu, Na; **EPA 245.1:** Mercury;

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO<sub>3</sub>-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate.

**Microbiology:** SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.

### ***Non-Potable Water***

**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Tl, Zn;

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, Ti, Tl, V, Zn;

**EPA 245.1, SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH<sub>3</sub>-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO<sub>3</sub>-F, EPA 353.2:** Nitrate-N, **SM4500NH<sub>3</sub>-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



8 Walkup Drive  
Westboro, MA 01581  
Tel: 508-898-9220

320 Forbes Blvd  
Mansfield, MA 02048  
Tel: 508-822-9300

# CHAIN OF CUSTODY

PAGE 1 OF 1

Serial No: 01131517-38

Date Rec'd in Lab: 1/6/15

ALPHA Job #: L1500146

## Client Information

Client: Tetra Tech

Address: One Grant Street

Framingham, MA

Phone: (508) 903-2000

Email: Kathleen.Culligan@tetratech.com  
Matt.Madden@tetratech.com

## Project Information

Project Name: ADESA Boston

Project Location: Framingham, MA

Project #: 143-1298-13008

Project Manager: Matt Madden

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: 5 d TAT

1/13/15

Additional Project Information:

## Report Information - Data Deliverables

☒ ADEX ☒ EMAIL

## Billing Information

☒ Same as Client Info PO #:

## Regulatory Requirements & Project Information Requirements

☒ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☒ No CT RCP Analytical Methods  
☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)  
☒ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)  
☐ Yes ☒ No NPDES RGP  
☐ Other State /Fed Program MCP RCS-1 Criteria

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials	ANALYSIS										SAMPLE INFO	TOTAL # BOTTLES
		Date	Time			VOC: <input checked="" type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 524.2	SVOC: <input checked="" type="checkbox"/> LABN <input type="checkbox"/> PAH	METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	METALS: <input checked="" type="checkbox"/> SCRA5 <input checked="" type="checkbox"/> CRA8	EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	TPH: <input checked="" type="checkbox"/> PCB <input type="checkbox"/> PEST	TPH: <input checked="" type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint	reactives sulfide/cyanide	pH, ionic strength	Specific Conductance	
20148601	CS-1-SS	1/5/15	12 <sup>15</sup>	5	KMC	X	X	X			X	X	X	X	X		4
02	CS-2-SS	↓	945	↓	↓	↓	↓	↓			↓	↓	↓	↓	↓		5
03	CS-3-SS	↓	15 <sup>15</sup>	↓	↓	↓	↓	↓			↓	↓	↓	↓	↓		
04	CS-4-SS	↓	1605	↓	↓	↓	↓	↓			↓	↓	↓	↓	↓		

## Container Type

P= Plastic  
A= Amber glass  
V= Vial  
G= Glass  
B= Bacteria cup  
C= Cube  
O= Other  
E= Encore  
D= BOD Bottle

## Preservative

A= None  
B= HCl  
C= HNO<sub>3</sub>  
D= H<sub>2</sub>SO<sub>4</sub>  
E= NaOH  
F= MeOH  
G= NaHSO<sub>4</sub>  
H= Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I= Ascorbic Acid  
J= NH<sub>4</sub>Cl  
K= Zn Acetate  
O= Other

Container Type

V A A A A A A A

Preservative

F/B A A A A A A A

Relinquished By:

Madden  
Madden

Date/Time

1/5/15 1630  
1/6/15 1630

Received By:

M. St. Amant  
M. St. Amant

Date/Time

1/6/15 1550  
1/6/15 1630

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

7A  
Volatile Organics CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1500186

Instrument ID: Voal00.i Calibration Date: 11-JAN-2015 Time: 10:44

Lab File ID: 0111A01 Init. Calib. Date(s): 30-DEC-2 30-DEC-2

Sample No: 8260 CCAL Init. Calib. Times : 12:33 15:44

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
=====	=====	=====	=====	=====	=====	
dichlorodifluoromethane	.14468	.1437	.1	-1	20	
chloromethane	.24568	.23708	.1	-3	20	
vinyl chloride	.23012	.30847	.1	34	20	F
bromomethane	.16442	.28705	.1	75	20	F
chloroethane	.16059	.25631	.1	60	20	F
trichlorofluoromethane	.315	.48072	.1	53	20	F
ethyl ether	.11591	.16252	.05	40	20	F
1,1,-dichloroethene	.19376	.20708	.1	7	20	
carbon disulfide	.64677	.65927	.1	2	20	
methylene chloride	.23208	.24518	.1	6	20	
acetone	100	98.621	.1	-1	20	
trans-1,2-dichloroethene	.22645	.22819	.1	1	20	
methyl tert butyl ether	.67547	.60579	.1	-10	20	
Diisopropyl Ether	.81343	.71504	.05	-12	20	
1,1-dichloroethane	.43345	.42512	.2	-2	20	
Ethyl-Tert-Butyl-Ether	.79842	.71937	.05	-10	20	
cis-1,2-dichloroethene	.25224	.25679	.1	2	20	
2,2-dichloropropane	.35226	.35069	.05	0	20	
bromochloromethane	.11669	.12316	.05	6	20	
chloroform	.42605	.4385	.2	3	20	
carbontetrachloride	.299	.33286	.1	11	20	
tetrahydrofuran	.07827	.06409	.05	-18	20	
1,1,1-trichloroethane	.36267	.37946	.1	5	20	
2-butanone	.11224	.10331	.1	-8	20	
1,1-dichloropropene	.32032	.33101	.05	3	20	
benzene	.90046	.91339	.5	1	20	
Tertiary-Amyl Methyl Ether	.71876	.63956	.05	-11	20	
1,2-dichloroethane	.33717	.32331	.1	-4	20	
trichloroethene	.2391	.24444	.2	2	20	
dibromomethane	.14557	.14574	.05	0	20	
1,2-dichloropropane	.24174	.23193	.1	-4	20	
bromodichloromethane	.33691	.33126	.2	-2	20	
1,4-dioxane	5000	4504	.05	-10	20	
cis-1,3-dichloropropene	.40021	.3805	.2	-5	20	
toluene	.76316	.77509	.4	2	20	
4-methyl-2-pentanone	100	80.250	.1	-20	20	
tetrachloroethene	.31738	.32642	.2	3	20	
trans-1,3-dichloropropene	.49785	.46305	.1	-7	20	

FORM VII MCP-8260HLW-10

7A  
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1500186

Instrument ID: Voal00.i Calibration Date: 11-JAN-2015 Time: 10:44

Lab File ID: 0111A01 Init. Calib. Date(s): 30-DEC-2 30-DEC-2

Sample No: 8260 CCAL Init. Calib. Times : 12:33 15:44

Compound	RRF	RRF	MIN RRF	%D	MAX %D
=====	=====	=====	=====	=====	=====
1,1,2-trichloroethane	.23276	.2253	.1	-3	20
chlorodibromomethane	.33147	.32633	.1	-2	20
1,3-dichloropropane	.4915	.47025	.05	-4	20
1,2-dibromoethane	.28278	.27343	.1	-3	20
2-hexanone	.28338	.18552	.1	-35	20
chlorobenzene	.87906	.90031	.5	2	20
ethyl benzene	1.5059	1.5216	.1	1	20
1,1,1,2-tetrachloroethane	.32623	.33049	.05	1	20
p/m xylene	.57761	.61246	.1	6	20
o xylene	.56817	.58549	.3	3	20
styrene	.97252	1.0147	.3	4	20
bromoform	.42056	.39077	.1	-7	20
isopropylbenzene	2.7923	2.7923	.1	0	20
bromobenzene	.69753	.65674	.05	-6	20
n-propylbenzene	3.2235	3.2413	.05	1	20
1,1,2,2,-tetrachloroethane	.76876	.69642	.3	-9	20
2-chlorotoluene	2.2595	1.9851	.05	-12	20
1,3,5-trimethylbenzene	2.3677	2.3397	.05	-1	20
1,2,3-trichloropropane	.62054	.56238	.05	-9	20
4-chlorotoluene	2.0222	1.9439	.05	-4	20
tert-butylbenzene	1.9967	1.9773	.05	-1	20
1,2,4-trimethylbenzene	2.3947	2.3610	.05	-1	20
sec-butylbenzene	3.0374	3.1231	.05	3	20
p-isopropyltoluene	2.5224	2.5730	.05	2	20
1,3-dichlorobenzene	1.3388	1.3730	.6	3	20
1,4-dichlorobenzene	1.3591	1.3812	.5	2	20
n-butylbenzene	2.2884	2.4386	.05	7	20
1,2-dichlorobenzene	1.2759	1.2559	.4	-2	20
1,2-dibromo-3-chloropropane	.1349	.11676	.05	-13	20
hexachlorobutadiene	.4435	.37843	.05	-15	20
1,2,4-trichlorobenzene	.87482	.79569	.2	-9	20
naphthalene	2.3725	2.0448	.05	-14	20
1,2,3-trichlorobenzene	.83465	.73845	.05	-12	20
=====	=====	=====	=====	=====	=====
dibromofluoromethane	.25775	.26897	.05	4	30
1,2-dichloroethane-d4	.29263	.27945	.05	-5	30
toluene-d8	1.2911	1.2688	.05	-2	30
4-bromofluorobenzene	.9654	.87147	.05	-10	30

F

FORM VII MCP-8260HLW-10

**Attachment 4**

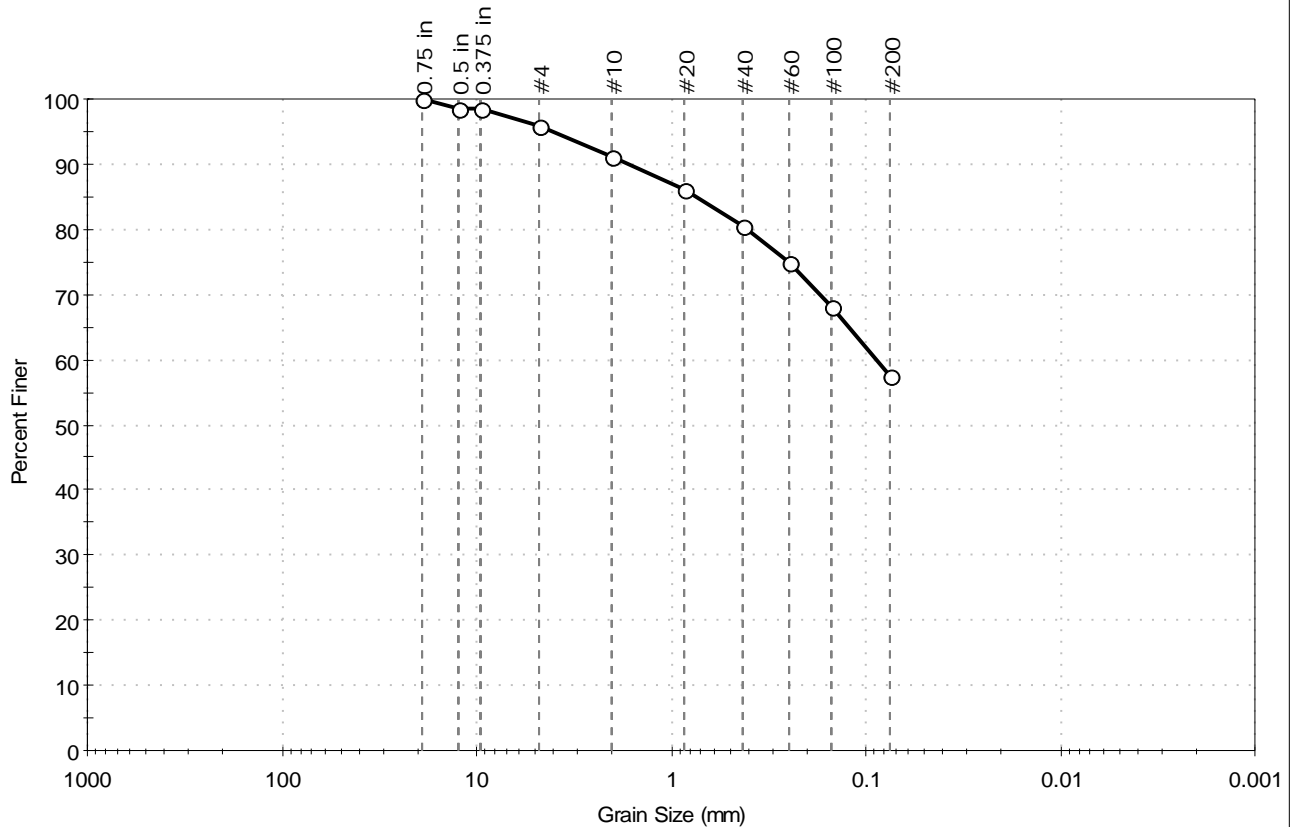
**Laboratory Certificates of Analysis – GeoTesting Express**





Client: Tetra Tech	Project: SolarBlue 63 Western Avenue	Project No: GTX-302742
Location: Framingham, MA	Boring ID: TT-1	Sample Type: bag
	Sample ID: S-4	Test Date: 01/21/15
	Depth : 8-10 ft	Test Id: 320315
Test Comment: ---	Sample Description: Moist, olive brown sandy silt	Tested By: jbr
	Sample Comment: ---	Checked By: jdt

## Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	4.3	38.1	57.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	98		
0.375 in	9.50	98		
#4	4.75	96		
#10	2.00	91		
#20	0.85	86		
#40	0.42	80		
#60	0.25	75		
#100	0.15	68		
#200	0.075	58		

### Coefficients

D <sub>85</sub> = 0.7414 mm	D <sub>30</sub> = N/A
D <sub>60</sub> = 0.0875 mm	D <sub>15</sub> = N/A
D <sub>50</sub> = N/A	D <sub>10</sub> = N/A
C <sub>u</sub> = N/A	C <sub>c</sub> = N/A

### Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

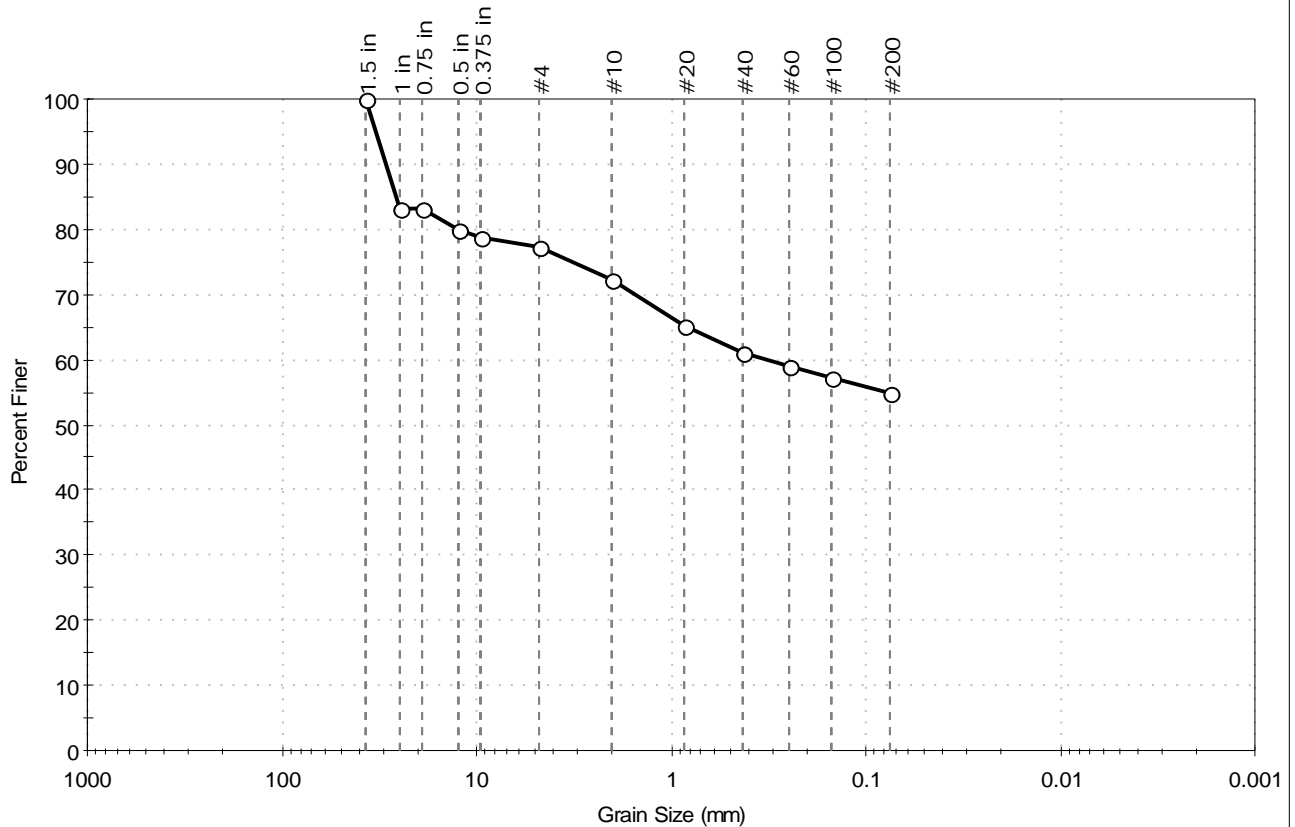
### Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED  
Sand/Gravel Hardness : HARD



Client: Tetra Tech	Project: SolarBlue 63 Western Avenue	Location: Framingham, MA	Project No: GTX-302742
Boring ID: TT-2	Sample Type: bag	Tested By: jbr	
Sample ID: S-4	Test Date: 01/21/15	Checked By: jdt	
Depth: 6-8 ft	Test Id: 320316		
Test Comment: ---			
Sample Description: Moist, olive gravelly silt with sand			
Sample Comment: ---			

## Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	22.8	22.3	54.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	83		
0.75 in	19.00	83		
0.5 in	12.50	80		
0.375 in	9.50	79		
#4	4.75	77		
#10	2.00	72		
#20	0.85	65		
#40	0.42	61		
#60	0.25	59		
#100	0.15	57		
#200	0.075	55		

Coefficients	
D <sub>85</sub> = 26.1573 mm	D <sub>30</sub> = N/A
D <sub>60</sub> = 0.3314 mm	D <sub>15</sub> = N/A
D <sub>50</sub> = N/A	D <sub>10</sub> = N/A
C <sub>u</sub> = N/A	C <sub>c</sub> = N/A

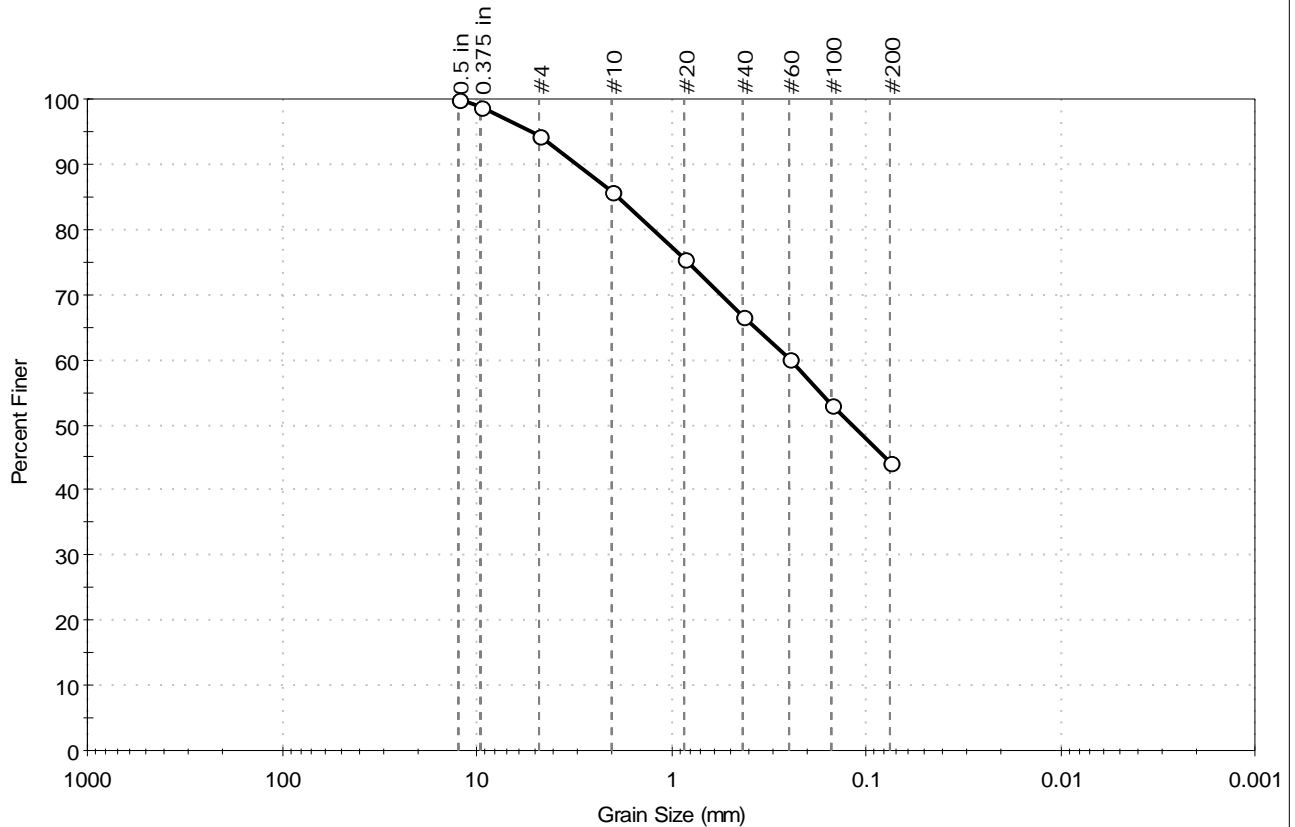
Classification	
ASTM	N/A
AASHTO	Silty Soils (A-4 (0))

Sample/Test Description	
Sand/Gravel Particle Shape	: ANGULAR
Sand/Gravel Hardness	: HARD



Client: Tetra Tech	Project: SolarBlue 63 Western Avenue	Project No: GTX-302742
Location: Framingham, MA	Boring ID: TT-3	Sample Type: bag
	Sample ID: S-4	Test Date: 01/21/15
	Depth: 6-8 ft	Test Id: 320317
Test Comment: ---	Tested By: jbr	Checked By: jdt
Sample Description: Moist, yellowish brown silty sand		
Sample Comment: Sample contained one 1" piece of gravel not included in test specimen.		

## Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	5.7	50.1	44.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	99		
#4	4.75	94		
#10	2.00	86		
#20	0.85	75		
#40	0.42	67		
#60	0.25	60		
#100	0.15	53		
#200	0.075	44		

Coefficients	
D <sub>85</sub> = 1.8664 mm	D <sub>30</sub> = N/A
D <sub>60</sub> = 0.2491 mm	D <sub>15</sub> = N/A
D <sub>50</sub> = 0.1176 mm	D <sub>10</sub> = N/A
C <sub>u</sub> = N/A	C <sub>c</sub> = N/A

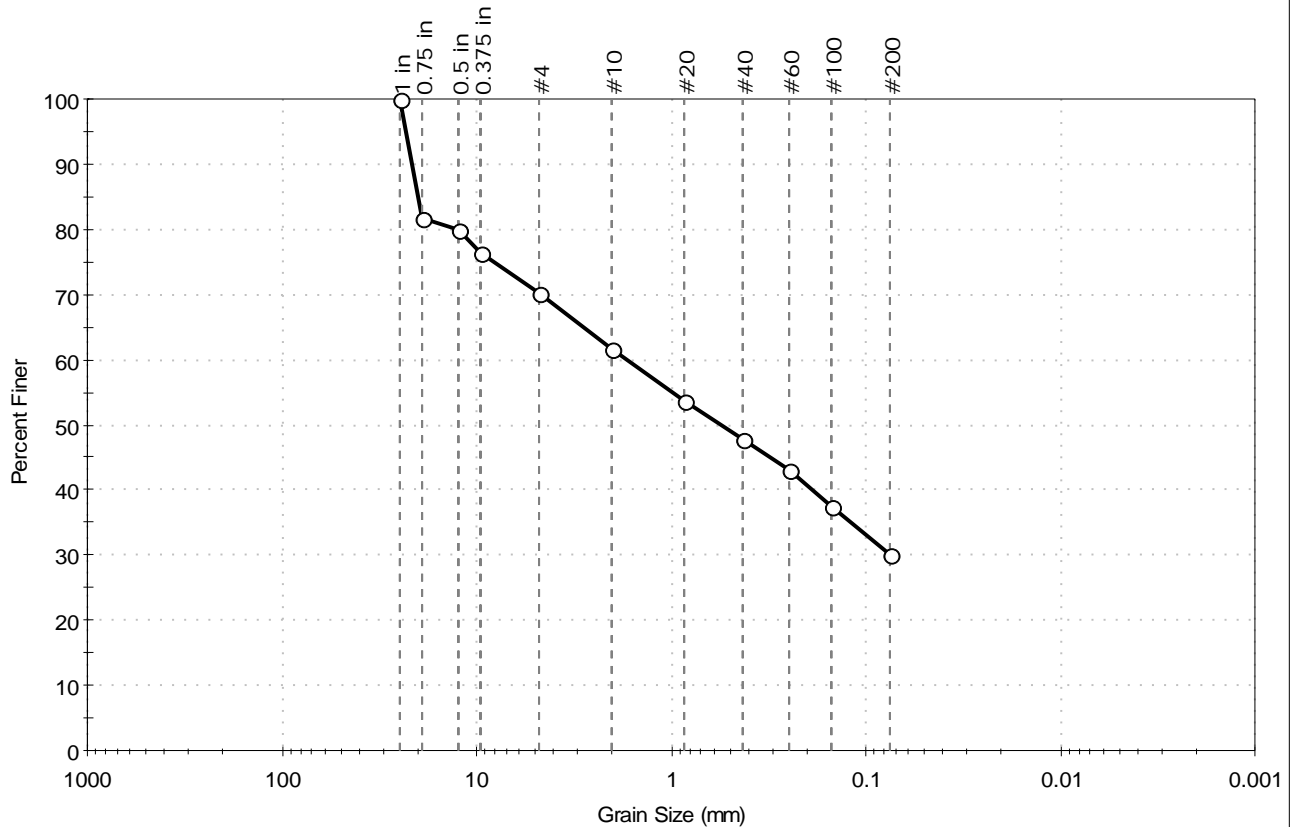
Classification	
ASTM	N/A
AASHTO	Silty Soils (A-4 (0))

Sample/Test Description
Sand/Gravel Particle Shape : ROUNDED
Sand/Gravel Hardness : HARD



Client: Tetra Tech	Project: SolarBlue 63 Western Avenue	Location: Framingham, MA	Project No: GTX-302742
Boring ID: TT-4	Sample Type: bag	Tested By: jbr	
Sample ID: S-4	Test Date: 01/21/15	Checked By: jdt	
Depth : 6-8 ft	Test Id: 320318		
Test Comment: ---			
Sample Description: Moist, brown silty sand with gravel			
Sample Comment: ---			

## Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	29.9	40.1	30.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	82		
0.5 in	12.50	80		
0.375 in	9.50	77		
#4	4.75	70		
#10	2.00	62		
#20	0.85	54		
#40	0.42	48		
#60	0.25	43		
#100	0.15	37		
#200	0.075	30		

### Coefficients

D <sub>85</sub> = 19.9482 mm	D <sub>30</sub> = N/A
D <sub>60</sub> = 1.6574 mm	D <sub>15</sub> = N/A
D <sub>50</sub> = 0.5535 mm	D <sub>10</sub> = N/A
C <sub>u</sub> = N/A	C <sub>c</sub> = N/A

### Classification

ASTM	N/A
AASHTO	Silty Gravel and Sand (A-2-4 (0))

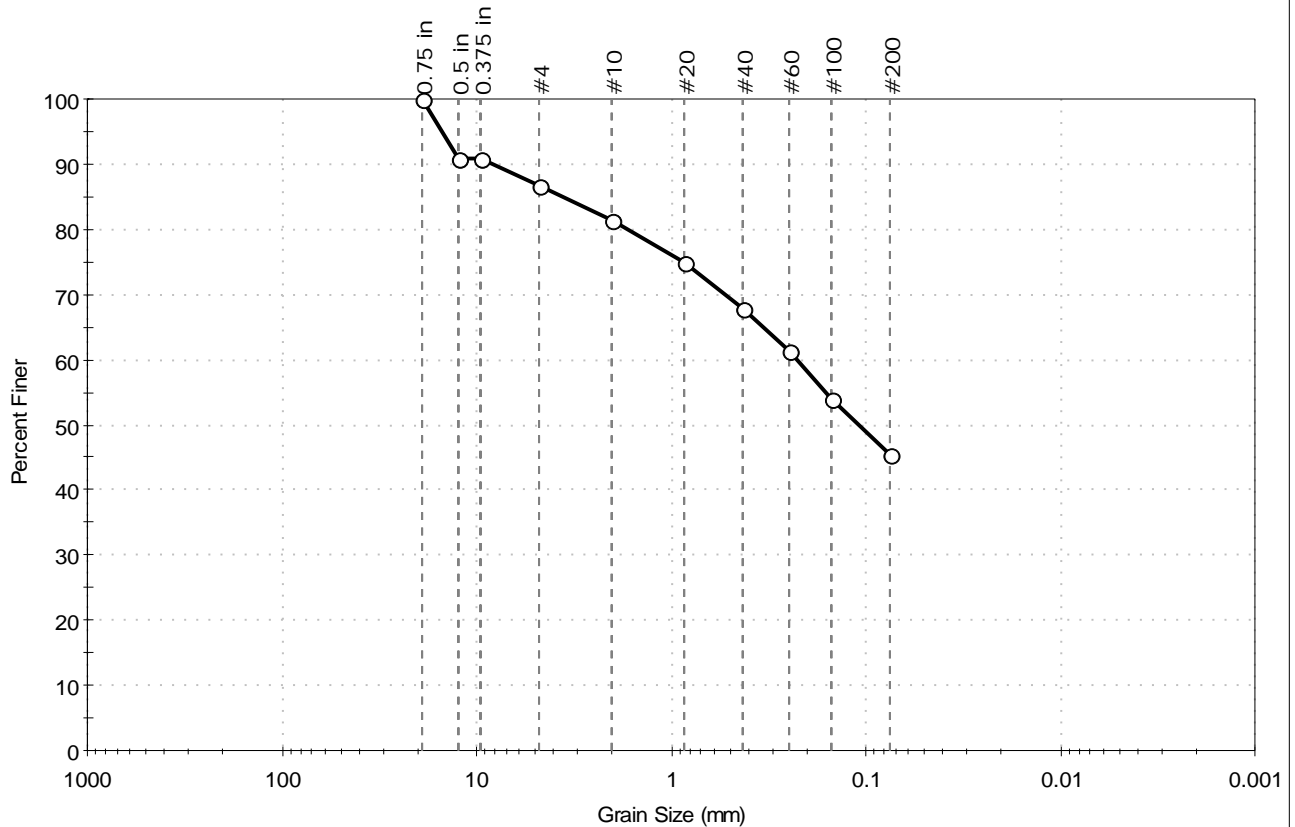
### Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED  
Sand/Gravel Hardness : HARD



Client: Tetra Tech	Project: SolarBlue 63 Western Avenue	Project No: GTX-302742
Location: Framingham, MA	Boring ID: TT-5	Sample Type: bag
Sample ID: S-4	Test Date: 01/21/15	Tested By: jbr
Depth: 6-8 ft	Test Id: 320319	Checked By: jdt
Test Comment: ---		
Sample Description: Moist, olive brown silty sand		
Sample Comment: ---		

## Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	13.4	41.2	45.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	91		
0.375 in	9.50	91		
#4	4.75	87		
#10	2.00	81		
#20	0.85	75		
#40	0.42	68		
#60	0.25	61		
#100	0.15	54		
#200	0.075	45		

Coefficients	
D <sub>85</sub> = 3.6183 mm	D <sub>30</sub> = N/A
D <sub>60</sub> = 0.2261 mm	D <sub>15</sub> = N/A
D <sub>50</sub> = 0.1082 mm	D <sub>10</sub> = N/A
C <sub>u</sub> = N/A	C <sub>c</sub> = N/A

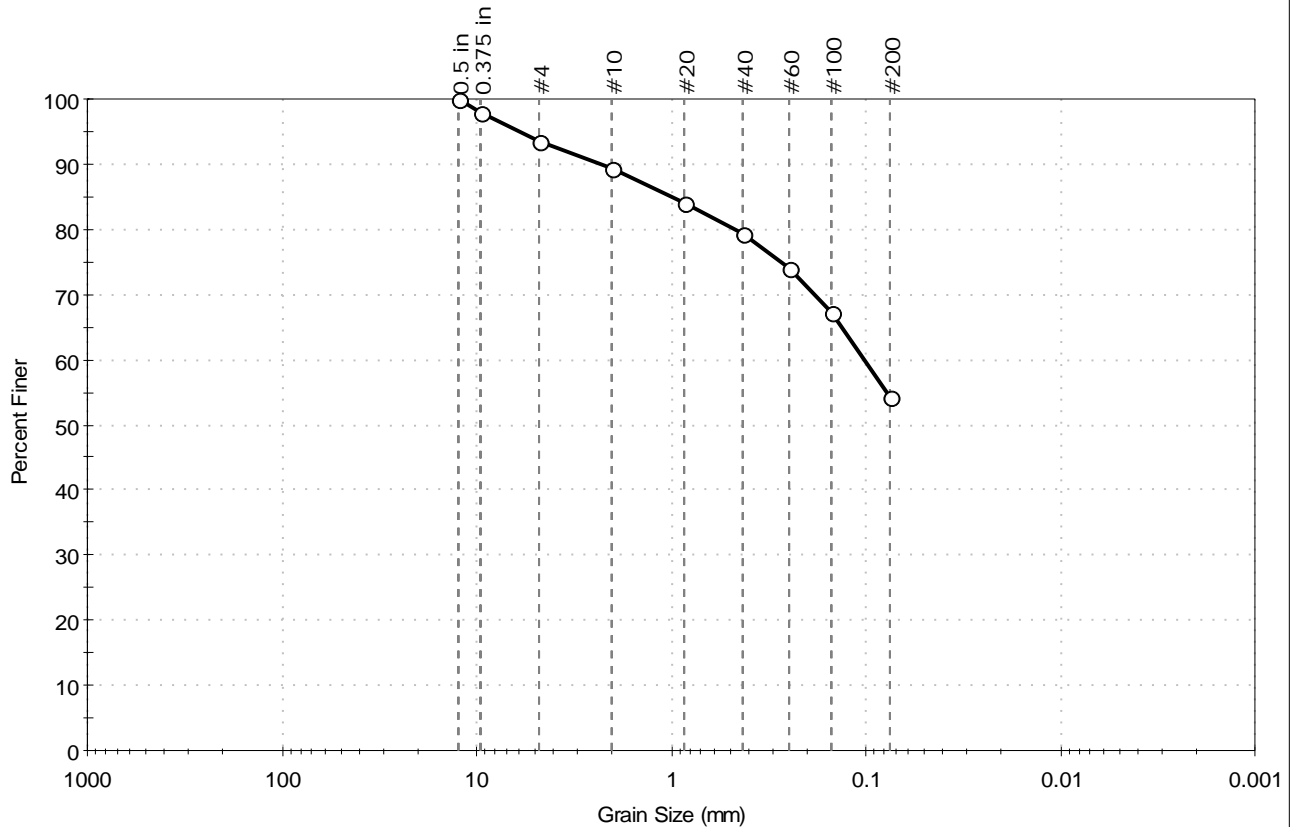
Classification	
ASTM	N/A
AASHTO	Silty Soils (A-4 (0))

Sample/Test Description
Sand/Gravel Particle Shape : ANGULAR
Sand/Gravel Hardness : HARD



Client: Tetra Tech	Project: SolarBlue 63 Western Avenue	Project No: GTX-302742
Location: Framingham, MA	Boring ID: TT-6	Sample Type: bag
	Sample ID: S-5	Test Date: 01/21/15
	Depth : 8-10 ft	Test Id: 320320
Test Comment: ---	Sample Description: Moist, yellowish brown sandy clay	Tested By: jbr
	Sample Comment: ---	Checked By: jdt

## Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	6.5	39.3	54.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	98		
#4	4.75	93		
#10	2.00	89		
#20	0.85	84		
#40	0.42	79		
#60	0.25	74		
#100	0.15	67		
#200	0.075	54		

Coefficients	
D <sub>85</sub> = 0.9811 mm	D <sub>30</sub> = N/A
D <sub>60</sub> = 0.1020 mm	D <sub>15</sub> = N/A
D <sub>50</sub> = N/A	D <sub>10</sub> = N/A
C <sub>u</sub> = N/A	C <sub>c</sub> = N/A

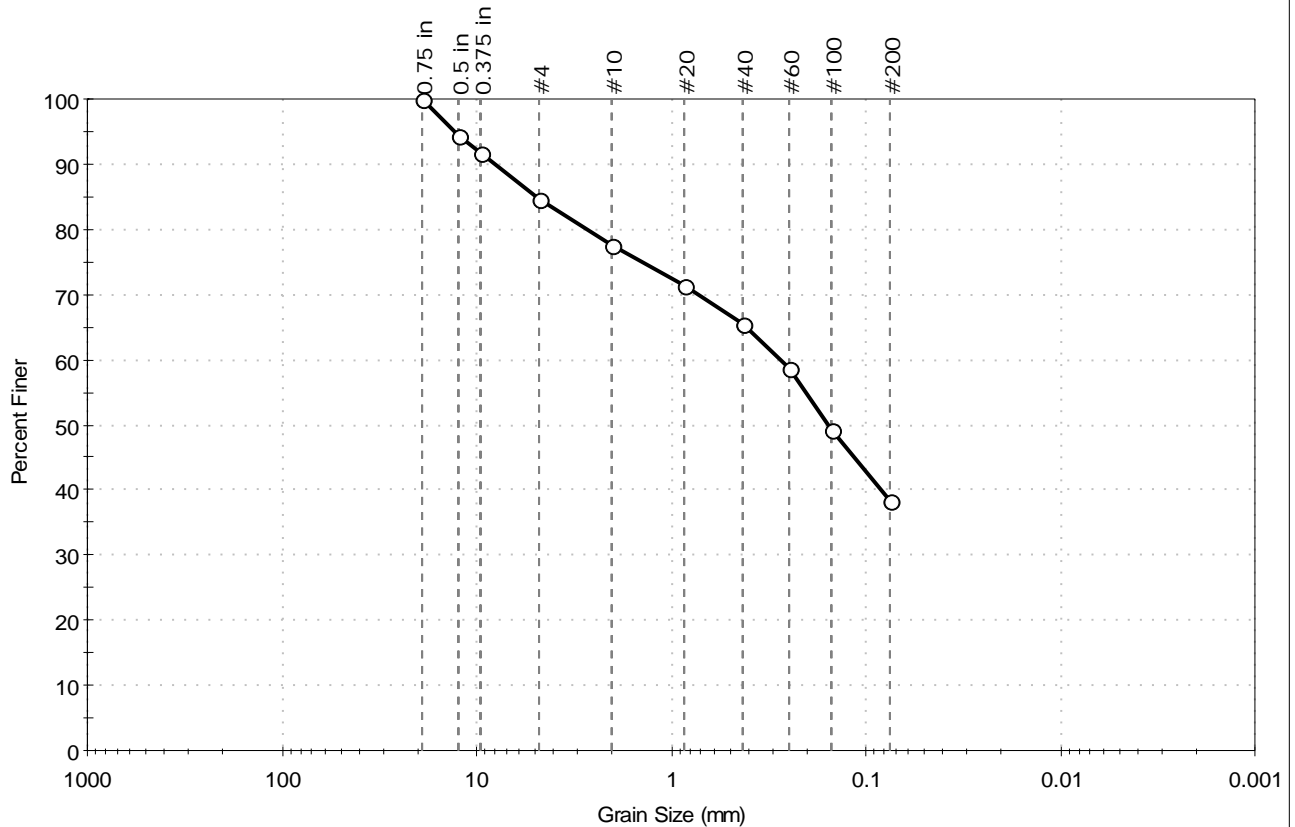
Classification	
ASTM	N/A
AASHTO	Silty Soils (A-4 (0))

Sample/Test Description
Sand/Gravel Particle Shape : ANGULAR
Sand/Gravel Hardness : HARD



Client: Tetra Tech	Project: SolarBlue 63 Western Avenue	Project No: GTX-302742
Location: Framingham, MA	Boring ID: TT-7	Sample Type: bag
Sample ID: S-3	Test Date: 01/21/15	Tested By: jbr
Depth: 4-6 ft	Test Id: 320321	Checked By: jdt
Test Comment: ---		
Sample Description: Moist, yellowish brown silty sand with gravel		
Sample Comment: ---		

## Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	15.3	46.5	38.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	94		
0.375 in	9.50	92		
#4	4.75	85		
#10	2.00	77		
#20	0.85	71		
#40	0.42	65		
#60	0.25	59		
#100	0.15	49		
#200	0.075	38		

### Coefficients

D <sub>85</sub> = 4.8910 mm	D <sub>30</sub> = N/A
D <sub>60</sub> = 0.2792 mm	D <sub>15</sub> = N/A
D <sub>50</sub> = 0.1553 mm	D <sub>10</sub> = N/A
C <sub>u</sub> = N/A	C <sub>c</sub> = N/A

### Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

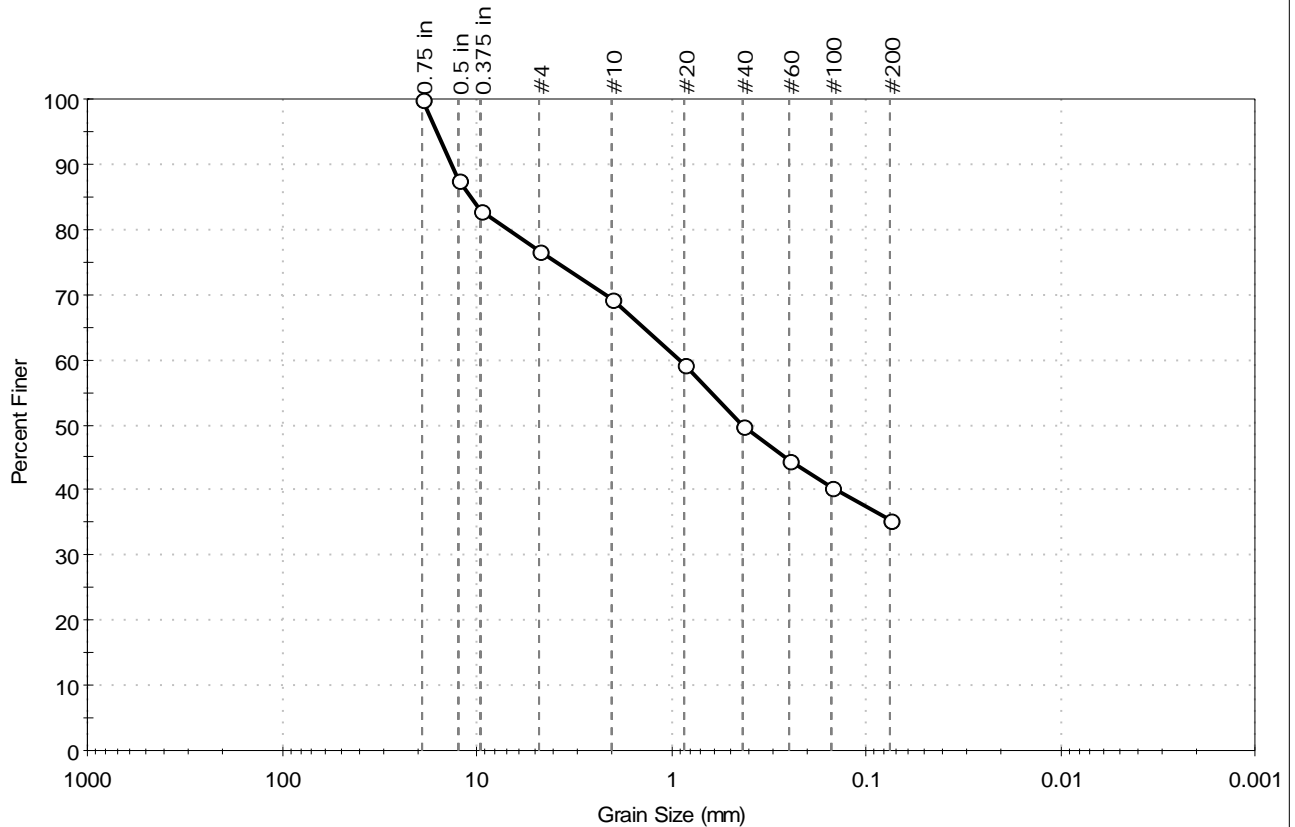
### Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR  
Sand/Gravel Hardness : HARD



Client: Tetra Tech	Project: SolarBlue 63 Western Avenue	Location: Framingham, MA	Project No: GTX-302742
Boring ID: TT-8	Sample Type: bag	Tested By: jbr	
Sample ID: S-5	Test Date: 01/21/15	Checked By: jdt	
Depth : 8-10 ft	Test Id: 320322		
Test Comment: ---			
Sample Description: Moist, olive silty sand with gravel			
Sample Comment: ---			

## Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	23.2	41.5	35.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	88		
0.375 in	9.50	83		
#4	4.75	77		
#10	2.00	69		
#20	0.85	59		
#40	0.42	50		
#60	0.25	45		
#100	0.15	40		
#200	0.075	35		

Coefficients	
D <sub>85</sub> = 10.6947 mm	D <sub>30</sub> = N/A
D <sub>60</sub> = 0.9040 mm	D <sub>15</sub> = N/A
D <sub>50</sub> = 0.4274 mm	D <sub>10</sub> = N/A
C <sub>u</sub> = N/A	C <sub>c</sub> = N/A

Classification	
ASTM	N/A
AASHTO	Silty Soils (A-4 (0))

Sample/Test Description
Sand/Gravel Particle Shape : ANGULAR
Sand/Gravel Hardness : HARD



**Attachment 5**

**MassDEP Similar Soils Provision Guidance WSC#-13-500**



# Department of Environmental Protection

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## Similar Soils Provision Guidance

### Guidance for Identifying When Soil Concentrations at a Receiving Location Are “Not Significantly Lower Than” Managed Soil Concentrations Pursuant to 310 CMR 40.0032(3)

September 4, 2014<sup>1</sup>

(Originally published October 2, 2013 and revised April 25, 2014<sup>2</sup>)

WSC#-13-500

*The information contained in this document is intended solely as guidance. This guidance does not create any substantive or procedural rights, and is not enforceable by any party in any administrative proceeding with the Commonwealth. Parties using this guidance should be aware that there may be other acceptable alternatives for achieving and documenting compliance with the applicable regulatory requirements and performance standards of the Massachusetts Contingency Plan.*

#### I. Purpose and Scope

The Massachusetts Contingency Plan (“MCP”, 310 CMR 40.0000) establishes conditions and requirements for the management of soil excavated at a disposal site. This guidance addresses the specific requirements of 310 CMR 40.0032(3) and the criteria by which a Licensed Site Professional (“LSP”) may determine that soil may be moved without prior notice to or approval from the Department. Soil managed pursuant to 310 CMR 40.0032(3) may be transported using a Bill of Lading (“BOL”), but a BOL is not required. Attachment 1 provides a flowchart depiction of the Similar Soil regulations and guidance.

This guidance is not applicable to the excavation and movement of soil from locations other than M.G.L. Chapter 21E disposal sites, nor to the management of soils considered Remediation Waste under the MCP.

<sup>1</sup> Updated to revise an inaccurate RCS-1 concentration for lead in Table 2 and an inaccurate RCS-2 concentration for selenium in Table 3.

<sup>2</sup> Updated to reflect the 2014 revisions to the Massachusetts Contingency Plan, 310 CMR 40.0000

## II. Relationship to Other Local, State or Federal Requirements

This guidance is intended to clarify and more fully describe regulatory requirements contained within the MCP. Nothing in this guidance eliminates, supersedes or otherwise modifies any local, state or federal requirements that apply to the management of soil, including any local, state or federal permits or approvals necessary before placing the soil at the receiving location, including, *but not limited to*, those related to placement of fill, noise, traffic, dust control, wetlands, groundwater or drinking water source protection.

## III. Requirements of 310 CMR 40.0032(3)

The requirements specified in 310 CMR 40.0032(3) are:

- (3) Soils containing oil or waste oil at concentrations less than an otherwise applicable Reportable Concentration and that are not otherwise a hazardous waste, and soils that contain one or more hazardous materials at concentrations less than an otherwise applicable Reportable Concentration and that are not a hazardous waste, may be transported from a disposal site without notice to or approval from the Department under the provisions of this Contingency Plan, provided that such soils:
- (a) are not disposed or reused at locations where the concentrations of oil or hazardous materials in the soil would be in excess of a release notification threshold applicable at the receiving site, as delineated in 310 CMR 40.0300 and 40.1600; and
  - (b) are not disposed or reused at locations where existing concentrations of oil and/or hazardous material at the receiving site are significantly lower than the levels of those oil and/or hazardous materials present in the soil being disposed or reused.

There are therefore four requirements that must be met before the managed soil can be moved to and re-used (or disposed) at a new location without notice to or approval from MassDEP. Each requirement (A. through D.) is addressed below.

### A. The Managed Soil Must Not Be a Hazardous Waste

310 CMR 40.0032(3) applies to soils containing oil or waste oil that are not otherwise a hazardous waste, and to soils containing hazardous materials that are not a hazardous waste. The MCP definition of hazardous waste (310 CMR 40.0006) refers to the definitions promulgated in the Massachusetts Hazardous Waste Regulations, 310 CMR 30.000.

Under the federal Resource Conservation and Recovery Act of 1976 (“RCRA”, 42 U.S.C. §§6901 *et. seq.*), the Massachusetts Hazardous Waste Management Act (M.G.L. c.21C), and the Massachusetts Hazardous Waste Regulations (310 CMR 30.000), soil is considered to contain a hazardous waste (hazardous waste soil) if, when generated, it meets either or both of the following two conditions:

- the soil exhibits one or more of the characteristics of a hazardous waste pursuant to 310 CMR 30.120 [such as exhibiting a characteristic of toxicity under 310 CMR 30.125 and 30.155 (Toxicity Characteristic Leaching Procedure, or TCLP)]; or
- the soil contains hazardous constituents from a listed hazardous waste identified in 310 CMR 30.130 or Title 40, Chapter I, Part 261 (Identification and Listing of Hazardous Waste) of the Code of Federal Regulations.

MassDEP has published a Technical Update entitled: *Considerations for Managing Contaminated Soil: RCRA Land Disposal Restrictions and Contained-In Determinations* (August 2010, <http://www.mass.gov/eea/docs/dep/cleanup/laws/contain.pdf>) that focuses on the determination of whether contaminated soil must be managed as a hazardous waste subject to RCRA requirements, and the presumptive approval process an LSP/PRP can use to document such a determination.

## **B. The Managed Soil Must Be Less Than Reportable Concentrations (RCs).**

This requirement is intended to ensure that the soil being excavated and relocated from a disposal site is not “Contaminated Soil” and therefore neither “Contaminated Media” nor “Remediation Waste” as those terms are defined in 310 CMR 40.0006<sup>3</sup>.

310 CMR 40.0361 sets forth two reporting categories for soil (RCS-1 and RCS-2). Reporting Category RCS-1 applies to locations with the highest potential for exposure, such as residences, playgrounds and schools, and to locations within the boundaries of a groundwater resource area. Reporting Category RCS-2 applies to all other locations.

Note that the “applicable Reportable Concentrations” referred to in 310 CMR 40.0032(3) may be the RCS-1 or RCS-2 criteria, depending upon which category would apply to the soils being excavated at the original disposal site location, not the RCs applicable to the soils at the receiving location (see Section III.C. below).

**EXAMPLE:** If soil is being excavated from a disposal site at an RCS-2 location and the soil contaminant concentrations are found to be less than the RCS-2 criteria, then the soil is not “Contaminated Soil” since the soil is less than the release notification threshold established for RCS-2 soil by 310 CMR 40.0300 and 40.1600. The RCS-2 soil in this example is not “Contaminated Soil” even if one or more constituent concentration is greater than an RCS-1 value.

Also, the language at 310 CMR 40.0032(3) specifies the *applicable* RCs. If a notification exemption (listed at 310 CMR 40.0317) applies to the OHM in soil at its original location, then the corresponding Reportable Concentration is not *applicable*. Thus 310 CMR 40.0032(3) should be read to apply to soils containing concentrations of oil or hazardous material (“OHM”) less than the applicable RCs or covered by a notification exemption. This interpretation of the requirement is consistent with the definition of Contaminated Soil, which uses the term “notification threshold” rather than “Reportable Concentration.”

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<sup>3</sup> Contaminated Soil - means soil containing oil and/or hazardous material at concentrations equal to or greater than a release notification threshold established by 310 CMR 40.0300 and 40.1600.

Contaminated Media - means Contaminated Groundwater, Contaminated Sediment, Contaminated Soil, and/or Contaminated Surface Water.

Remediation Waste - means any Uncontainerized Waste, Contaminated Media, and/or Contaminated Debris that is managed pursuant to 310 CMR 40.0030. The term "Remediation Waste" does not include Containerized Waste.

**C. The Managed Soil Must Not Create a Notifiable Condition at the Receiving Location.**

This requirement is intended to prevent the creation of new reportable releases that must be subsequently assessed and remediated.

If the contaminant concentrations in the soil being relocated are less than the RCS-1 criteria, then placement of the soil in any RCS-1 location would not create a new notifiable condition. There are, however, conditions that could result in a notifiable condition.

First, if the soil is excavated from an RCS-2 location (as described in the example in Section III.B. above) with contaminant concentrations between the RCS-1 and RCS-2 criteria, then the placement of that soil at an RCS-1 receiving location would create a notifiable condition since one or more concentrations of OHM would then exceed the RCS-1 criteria in the RCS-1 receiving location.

Second, a notification exemption that applies to the original location of the soil may not apply to the receiving location. (For example, the lead paint exemption at 310 CMR 40.0317(8) is specific to “the point of application.”) In cases where a notification exemption applies only to the original location, the managed soil must be evaluated solely based on whether its OHM concentrations exceed the applicable RCs at the receiving location.

**D. The Managed Soil Must Not Be Significantly More Contaminated Than the Soil at the Receiving Location.**

This requirement has been referred to as the “anti-degradation provision” although it is more accurately described as the “Similar Soils Provision.” 310 CMR 40.00032(3)(b) requires that the concentrations of OHM at the receiving location not be “significantly lower” than the relocated soil OHM concentrations. One could also say that the provision requires that “there is no significant difference between the relocated soil and the soil at the receiving location,” or that “the soils being brought to the receiving location are similar to what is already there.” This requirement embodies several considerations.

First, as a general principle, M.G.L. c.21E is intended to clean up contaminated properties and leave them better than they started -- even to clean sites to background conditions, if feasible. It would be inconsistent with this principle to then raise the ambient levels of contamination in the environment as a consequence of a response action conducted under the MCP.

Second, despite the three other requirements (A. through C. above) of 310 CMR 40.0032(3), decisions about the movement of the managed soil will be based upon sampling of soil that is likely to have significant heterogeneity. The Similar Soils Provision is an additional measure to minimize the adverse effects of soil characterization that may not be representative of such heterogeneity.

Third, none of the criteria of 310 CMR 40.0032(3) address the question of whether the soil poses a risk in its original or receiving location, although the hazardous waste- and notification-related requirements seem to *imply* risk-based decision making. Put simply, soil that is not a hazardous waste and does not require notification may still pose incremental risk at the receiving location. The Similar Soils Provision is intended to ensure that the managed soil does not increase risk of harm to health, safety, public welfare or the environment at the receiving location, since it will be similar to what is already there.

The “not... significantly lower” language of 310 CMR 40.0032(3)(b) can be interpreted to mean either a quantitative “not statistically different” analysis, or a semi-quantitative, albeit somewhat subjective, approach. MassDEP does not believe that a statistics-driven quantitative approach is necessary when comparing managed soil to known or assumed background conditions, given (a) the relatively low concentrations at issue and (b) the cost of such an analysis, driven by the quantity of sampling needed to show a statistical difference.

The regulations imply that the LSP must have knowledge about the concentrations of OHM in the soil at the receiving location in order to apply the Similar Soils Provision. The regulations also imply that the new soil may contain concentrations of OHM that are somewhat higher than those levels at the receiving location – just not “significantly” higher.

MassDEP recognizes that there may be several approaches to address this “knowledge” issue when implementing the Similar Soils Provision of the MCP.

- **Assume the soils at the receiving location are natural background.**

Sampling of the soil at the receiving location is not necessary if it is assumed that the concentrations of OHM there are consistent with natural background conditions. MassDEP acknowledges that there is a range of background levels, and that the concentrations at any given location may be lower than the statewide levels published by the Department<sup>4</sup>, but the costs associated with determining site-specific background are not justified by likely differences. Further, the published “natural background” levels are similarly used in several areas of the MCP as an acceptable endpoint, including site delineation and the development of the MCP cleanup standards.

Of course, routine due diligence about the receiving location may still reveal factors that would make the location inappropriate to receive the proposed fill material. Nothing in this guidance relieves any party of the obligation to conduct such due diligence and appropriately consider and act on information thereby obtained.

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<sup>4</sup> See Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil (May, 2002) <http://www.mass.gov/eea/docs/dep/cleanup/laws/backtu.pdf>

- **Sample the soils at the receiving location.**

The sampling plan should include a sufficient number of samples taken at locations selected to provide an understanding of the concentrations of OHM present and the distribution of OHM throughout the receiving location. In order to provide data appropriate for the Similar Soils comparison, the soil at the receiving location should be analyzed for constituents that are likely to be present there (e.g., naturally occurring metals) as well as any OHM known or likely to be present in the soil brought from the disposal site. If a receiving location has been adequately and comprehensively characterized, that data may then be used for comparison to the OHM concentrations in any subsequent soil deliveries - additional sampling is not required.

- **Provide Technical Justification for an Alternative Approach**

There may be situations for which a different combination of analytical and non-analytical information available for both the source and receiving locations is sufficient to conclude that the nature and concentrations of OHM in the soils are not significantly different. Guidance on recognizing such conditions and the level of documentation that would be necessary to support such a technical justification is beyond the scope of this guidance.

Once the concentrations of OHM in the soils are known (or assumed consistent with this guidance), the LSP must compare the concentrations of the source and receiving locations and determine whether the concentrations at the receiving location are “significantly lower” than those in the soil proposed to be relocated from the disposal site. This comparison may be conducted in several ways, including analyses with appropriate statistical power and confidence. MassDEP has also developed a *rule-of-thumb* comparison to simplify this determination, as described in Section IV.

#### **IV. Determining whether soils at the receiving location are “significantly lower” using a simplified approach**

The simplified comparison shall be made using the maximum values of the OHM concentrations in both the soil at the receiving location and the soil proposed to be disposed of or reused.

Use of the maximum values is appropriate for several reasons. First, the provisions of 310 CMR 40.0032(3) include comparisons to Reportable Concentrations, and notification is triggered by any single value (i.e., maximum value) exceeding the RC. Second, soil is by its nature heterogeneous, and the use of maximum values is a means of minimizing sampling costs while addressing the expected variability of results. Third, if natural background levels are assumed at the receiving location, the MassDEP published background concentrations are upper percentile levels that are only appropriately compared to similar (e.g., maximum) values of the soil data set.

Note also that when using the maximum reported concentrations for comparison purposes, the typical or average concentration will be lower. This is important to recognize if/when the question of the risk posed by the soil is raised. For example, the RCS-1 and the Method 1 S-1 standard for arsenic are both 20 mg/kg. The Reportable Concentration is applied as a not-to-be-exceeded value, triggering the need to report the release and investigate further. However the S-1 standard is applied as an average value, considering exposure over time. At a location where the highest arsenic value found is less than 20 mg/kg, the average concentration would be well below the Method 1 S-1 standard.

The maximum concentration in the soil at the receiving location may be less than that in the proposed disposed/reused soil by some amount and not be considered “significantly lower.” The question is how much lower is “significantly lower”? In this guidance, MassDEP establishes a multiplying factor to be applied to the concentration in the soil at the receiving location. The multiplying factor varies depending upon the concentration in the soil at the receiving location, as shown in Table 1.

**Table 1. Receiving Soil Concentration Multiplying Factors**

<b>If the concentration in soil at the receiving location for a given OHM is:</b>	<b>Then use a multiplying factor of:</b>
< 10 mg/kg	10
10 mg/kg $\leq x$ < 100 mg/kg	7.5
100 mg/kg $\leq x$ < 1,000 mg/kg	5
$\geq 1,000$ mg/kg	2.5

**EXAMPLE:** The soil at a receiving location that is considered RCS-1 is appropriately sampled and the maximum concentration of silver is found to be 6 mg/kg. Using Table 1, the concentration of silver at the receiving location would not be considered “significantly lower” than  $10 \times 6 \text{ mg/kg} = 60 \text{ mg/kg}$ . Since 60 mg/kg is less than the silver RCS-1 value of 100 mg/kg, soil containing a maximum concentration that is less than 60 mg/kg silver could be reused at this location.

**EXAMPLE:** The soil at a receiving location that is considered RCS-1 is assumed to be consistent with natural background. The MassDEP published natural background level for arsenic is 20 mg/kg. Using Table 1, the concentration of arsenic at the receiving location would not be considered “significantly lower” than  $7.5 \times 20 \text{ mg/kg} = 150 \text{ mg/kg}$ . However, since 150 mg/kg is greater than the arsenic RCS-1 value of 20 mg/kg, only soil containing a maximum concentration that is less than 20 mg/kg arsenic could be reused at this location. [The managed soil must not create a notifiable condition at the receiving location, see Section III.C. above.]



**EXAMPLE:** The soil at a receiving location that is considered RCS-2 is assumed to be consistent with natural background. The MassDEP published natural background level for benzo[a]anthracene is 2 mg/kg. Using Table 1, the concentration of benzo[a]anthracene at the receiving location would not be considered “significantly lower” than  $10 \times 2 \text{ mg/kg} = 20 \text{ mg/kg}$ . Since 20 mg/kg is less than the benzo[a]anthracene RCS-2 value of 40 mg/kg, soil containing a maximum concentration that is less than 20 mg/kg benzo[a]anthracene could be reused at this location. [Note that due to the lower reportable concentration, RCS-1 receiving locations could only accept soil containing less than 7 mg/kg benzo[a]anthracene.]

The multiplying factors in Table 1 and the MassDEP published natural background levels can be used to establish concentrations of OHM in soil that would be acceptable for reuse at an RCS-1 receiving location, consistent with the requirements of 310 CMR 40.0032(3). Table 2 lists such concentrations. Note that soil that meets the criteria in Table 2 could be re-used at any location (RCS-1 or RCS-2). Similarly, Table 3 lists concentrations of OHM in soil that would be acceptable for reuse at an RCS-2 receiving location (but not RCS-1 locations).

If a chemical is not listed on these tables, then MassDEP has not established a natural background concentration<sup>5</sup>. This guidance is limited to the use of only MassDEP-published statewide background concentrations. Therefore an alternative approach, such as sampling the receiving location and comparing maximum reported concentrations, would be appropriate to meet the requirements of 310 CMR 40.0032(3).

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<sup>5</sup> For example, MassDEP has not established natural background levels for PCBs, volatile organic compounds (VOCs) or petroleum-related constituents.

**Table 2.**  
**Limits to the Concentration of OHM In Soil for Re-Use**  
**Assuming Natural Background Conditions at an RCS-1 Receiving Location**

OIL OR HAZARDOUS MATERIAL	Concentration In "Natural" Soil mg/kg	Rule-of- Thumb Multiplier	Multiplied Value mg/kg	RCS-1 mg/kg	Limiting <sup>1</sup> Soil Concentration mg/kg
ACENAPHTHENE	0.5	10	5	4	< 4
ACENAPHTHYLENE	0.5	10	5	1	< 1
ALUMINUM	10,000	2.5	25000		< 25000
ANTHRACENE	1	10	10	1000	< 10
ANTIMONY	1	10	10	20	< 10
ARSENIC	20	7.5	150	20	< 20
BARIUM	50	7.5	375	1000	< 375
BENZO(a)ANTHRACENE	2	10	20	7	< 7
BENZO(a)PYRENE	2	10	20	2	< 2
BENZO(b)FLUORANTHENE	2	10	20	7	< 7
BENZO(g,h,i)PERYLENE	1	10	10	1000	< 10
BENZO(k)FLUORANTHENE	1	10	10	70	< 10
BERYLLIUM	0.4	10	4	90	< 4
CADMIUM	2	10	20	70	< 20
CHROMIUM (TOTAL)	30	7.5	225	100	< 100
CHROMIUM(III)	30	7.5	225	1000	< 225
CHROMIUM(VI)	30	7.5	225	100	< 100
CHRYSENE	2	10	20	70	< 20
COBALT	4	10	40		< 40
COPPER	40	7.5	300		< 300
DIBENZO(a,h)ANTHRACENE	0.5	10	5	0.7	< 0.7
FLUORANTHENE	4	10	40	1000	< 40
FLUORENE	1	10	10	1000	< 10
INDENO(1,2,3-cd)PYRENE	1	10	10	7	< 7
IRON	20,000	2.5	50000		< 50000
LEAD	100	5	500	200	< 200
MAGNESIUM	5,000	2.5	12500		< 12500
MANGANESE	300	5	1500		< 1500
MERCURY	0.3	10	3	20	< 3
METHYLNAPHTHALENE, 2-	0.5	10	5	0.7	< 0.7
NAPHTHALENE	0.5	10	5	4	< 4
NICKEL	20	7.5	150	600	< 150
PHENANTHRENE	3	10	30	10	< 10
PYRENE	4	10	40	1000	< 40
SELENIUM	0.5	10	5	400	< 5
SILVER	0.6	10	6	100	< 6
THALLIUM	0.6	10	6	8	< 6
VANADIUM	30	7.5	225	400	< 225
ZINC	100	5	500	1000	< 500

<sup>1</sup> Concentration of OHM in soil must be LESS THAN (not equal or greater than) this value.

**Table 3.**  
**Limits to the Concentration of OHM In Soil for Re-Use**  
**Assuming Natural Background Conditions at an RCS-2 Receiving Location**

OIL OR HAZARDOUS MATERIAL	Concentration			RCS-2	Limiting <sup>1</sup>	
	In "Natural" Soil mg/kg	Rule-of- Thumb Multiplier	Multiplied Value mg/kg		Soil Concentration mg/kg	
ACENAPHTHENE	0.5	10	5	3000	<	5
ACENAPHTHYLENE	0.5	10	5	10	<	5
ALUMINUM	10,000	2.5	25000		<	25000
ANTHRACENE	1	10	10	3000	<	10
ANTIMONY	1	10	10	30	<	10
ARSENIC	20	7.5	150	20	<	20
BARIUM	50	7.5	375	3000	<	375
BENZO(a)ANTHRACENE	2	10	20	40	<	20
BENZO(a)PYRENE	2	10	20	7	<	7
BENZO(b)FLUORANTHENE	2	10	20	40	<	20
BENZO(g,h,i)PERYLENE	1	10	10	3000	<	10
BENZO(k)FLUORANTHENE	1	10	10	400	<	10
BERYLLIUM	0.4	10	4	200	<	4
CADMIUM	2	10	20	100	<	20
CHROMIUM (TOTAL)	30	7.5	225	200	<	200
CHROMIUM(III)	30	7.5	225	3000	<	225
CHROMIUM(VI)	30	7.5	225	200	<	200
CHRYSENE	2	10	20	400	<	20
COBALT	4	10	40		<	40
COPPER	40	7.5	300		<	300
DIBENZO(a,h)ANTHRACENE	0.5	10	5	4	<	4
FLUORANTHENE	4	10	40	3000	<	40
FLUORENE	1	10	10	3000	<	10
INDENO(1,2,3-cd)PYRENE	1	10	10	40	<	10
IRON	20,000	2.5	50000		<	50000
LEAD	100	5	500	600	<	500
MAGNESIUM	5,000	2.5	12500		<	12500
MANGANESE	300	5	1500		<	1500
MERCURY	0.3	10	3	30	<	3
METHYLNAPHTHALENE, 2-	0.5	10	5	80	<	5
NAPHTHALENE	0.5	10	5	20	<	5
NICKEL	20	7.5	150	1000	<	150
PHENANTHRENE	3	10	30	1000	<	30
PYRENE	4	10	40	3000	<	40
SELENIUM	0.5	10	5	700	<	5
SILVER	0.6	10	6	200	<	6
THALLIUM	0.6	10	6	60	<	6
VANADIUM	30	7.5	225	700	<	225
ZINC	100	5	500	3000	<	500

<sup>1</sup> Concentration of OHM in soil must be LESS THAN (not equal or greater than) this value.

## V. Sampling Considerations

The soil proposed for disposal/re-use should be sampled at sufficient and adequately distributed locations so that the concentrations of the contaminants of concern in the soil are adequately characterized. This includes sampling for the purpose of MCP site assessment and sampling to characterize the soil in any given stockpile/shipment leaving the site. The factors listed below should be considered when developing and implementing such a sampling plan. Evaluation of release, source, and site specific conditions assist in developing the basis for the selection of field screening techniques, sampling methodologies, sampling frequencies, and the contaminants of concern (e.g., analytical parameters) used to characterize the soil. These include, but are not necessarily limited to the following:

- the type(s) and likely constituents known or suspected to be in the soil;
- current and former site uses, past incidents involving the spill or release of OHM, and past and present management practices of OHM at the site;
- the potential for the soil to contain listed hazardous waste or to be a characteristic hazardous waste;
- the presence or likelihood of any other OHM (e.g., chlorinated solvents, metals, polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), halogenated volatile organic compounds (VOCs));
- visual/olfactory observations, field screening, analytical data, and/or in-situ pre-characterization data;
- soil matrix type - naturally occurring soil or fill/soil mixtures (e.g., homogeneous or heterogeneous soil conditions);
- the identification and segregation of discrete "hot spots";
- the concentration variability in the soil;
- the volume of soil;
- the current and likely future exposure potential at the receiving location, including the potential for sensitive receptors, such as young children, to contact the soil (for example, more extensive sampling of the stockpiles would be warranted for soil slated to be moved to a residential setting than for soil being moved to a secure, low-exposure potential regulated receiving facility); and
- any sampling requirements stipulated by the receiving location.

The assessment of the soil, including the nature and concentrations of OHM therein, is a component of the MCP site assessment and therefore must meet all applicable performance standards, including those for environmental sample collection, analysis and data usability<sup>6</sup>. The assessment should address the precision, accuracy, completeness, representativeness, and comparability of the sampling and analytical results used to determine whether the soil

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<sup>6</sup> Additional guidance on data usability is available in Policy #WSC-07-350, MCP Representativeness Evaluations and Data Usability Assessments. <http://www.mass.gov/eea/docs/dep/cleanup/laws/07-350.pdf>

stockpiles meet the Similar Soils Provision requirements. The representativeness of any site assessment sampling data if used to characterize contaminant concentrations in soil to be moved and reused offsite should be carefully evaluated. Additional guidance on soil sampling considerations is available from U.S. EPA and other state environmental agencies.<sup>7</sup>

## VI. Segregation and Management of Soils of Different Known Quality

Soil containing concentrations of OHM equal to or greater than the values listed in Table 3 cannot be managed using the streamlined approach described in this guidance. Such soil must be managed in a manner consistent with its regulatory classification, which may include management as a hazardous waste, as a remediation waste, or under a case-specific Similar Soils determination.

Segregation of soil of different quality should occur based upon *in-situ* pre-characterization sampling results. Stockpiles of soil are mixtures that would require more extensive sampling to document the effectiveness of any attempted post-excavation segregation.

The known presence of soil that exceeds the Table 3 concentrations and the subsequent segregation of soil is one factor that would indicate the need for more frequent sampling (at least in that area of soil excavation) as described in Section V.

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<sup>7</sup> Note that the guidance below are not specific to MGL Chapter 21E disposal sites and may not reflect MCP-specific considerations to determine the suitability of soils for offsite transport and use, such as for residential and other S-1 locations.

NJDEP. 2011. Alternative and Clean Fill Guidance for SRP Sites.  
New Jersey Department of Environmental Protection Site Remediation Program  
[http://www.state.nj.us/dep/srp/guidance/srra/fill\\_protocol.pdf](http://www.state.nj.us/dep/srp/guidance/srra/fill_protocol.pdf)

USEPA. 1992. Supplemental Guidance to RAGS: Calculating the Concentration Term.  
Office of Solid Waste and Emergency Response (OSWER), Washington, DC  
[http://www.epa.gov/oswer/riskassessment/pdf/1992\\_0622\\_concentrationterm.pdf](http://www.epa.gov/oswer/riskassessment/pdf/1992_0622_concentrationterm.pdf)

USEPA. 1995. Superfund Program Representative Sampling Guidance Volume 1: Soil.  
OSWER. Washington, DC.  
(Note that guidance for determining the number of samples for statistical analysis is addressed in Section 5.4.1).  
[http://www.epa.gov/tio/download/char/sf\\_rep\\_samp\\_guid\\_soil.pdf](http://www.epa.gov/tio/download/char/sf_rep_samp_guid_soil.pdf)

## Attachment 1 – Similar Soil Flowchart

